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ABSTRACT

This document includes three of a set of four components covering the food service occupational cluster. The reference book (1985) provides information needed by employees in this occupational area, concentrating on the skills and attitudes needed for successful employment in the food service industry. It provides basic and current information on many types of food service occupations. Each chapter begins with competencies and objectives. Within the text, italicized, bold-faced vocabulary terms are followed by a definition or explanation. Illustrations of equipment and procedures aid student learning. The content of each chapter is summarized in "points to remember," and the vocabulary terms are repeated in a list of "words to know." Review questions are provided as a student self-test. The student activity book provides a variety of pencil-and-paper activities correlated with chapters in the reference book. The student aid book provides information at third-to-fourth-grade reading level and simplified pencil-and-paper activities. The series of coordinated components is designed to meet a variety of instructional needs, for both cooperative education and laboratory education students and regular and special needs students. (KC)

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FOOD PRODUCTION, MANAGEMENT, AND SERVICES

REFERENCE BOOK, STUDENT ACTIVITY BOOK, STUDENT AID BOOK

HOME ECONOMICS CURRICULUM CENTER
TEXAS TECH UNIVERSITY

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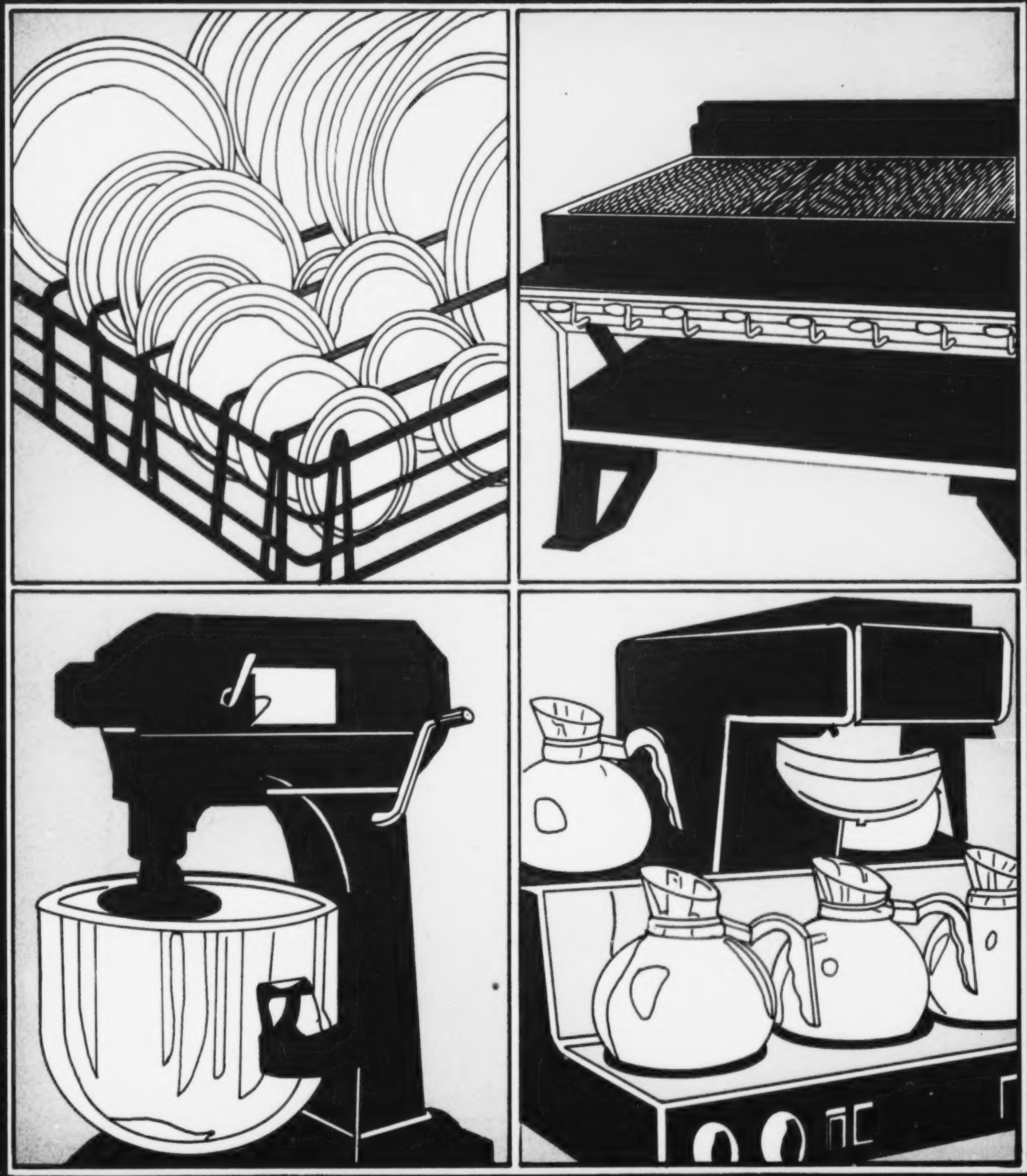

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3

Food Production, Management, and Services

Reference Book

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DECEMBER, 1985

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Table of Contents

Page

Preface xiii

Acknowledgments xv

1–The Food Service Industry

Food Service Industry 1
Food Service Units 2
Food Service Work 4
Points To Remember 5
Words To Know 6
Questions For Review 6

2–Food Service Careers

Areas of Food Service Operation 7
Influences on Staff Needs 8
Types of Jobs 9
Related Opportunities 11
Personal Characteristics Needed 11
Points To Remember 12
Words To Know 12
Questions For Review 12

3–Safety

Government Regulations 14
Management Responsibilities 14
Employee Responsibilities 15
Accident Causes 15
Preventing Accidents 16
Points To Remember 19
Words To Know 20
Questions For Review 20

4–Emergency Procedures

Fire 21
Weather or Disaster Emergencies 25
Medical Emergencies 26
Reporting Accidents 29
Points To Remember 29
Words To Know 30
Questions For Review 30

5–Personnel, Equipment, and Facility Sanitation

Codes and Standards ... 33
Personal Sanitation ... 34
Dishwashing ... 36
Cleaning Stationary Equipment ... 38
Facility Sanitation ... 39
Controlling Pests ... 41
Points to Remember ... 43
Words to Know ... 44
Questions for Review ... 44

6–Food Sanitation

Food-Borne Illnesses ... 46
Sanitation in Food Handling ... 50
Points to Remember ... 52
Words to Know ... 53
Questions for Review ... 53

7–Nutrition

Functions of Food ... 55
Sources and Functions of Nutrients ... 56
Food Selection ... 64
Factors Affecting Eating Habits ... 66
Meal Patterns ... 69
Nutrition and the Food Service Worker ... 70
Points To Remember ... 71
Words To Know ... 72
Questions For Review ... 73

8–Special Diets

Cycle Menus ... 76
Meals for Young Children ... 76
School Cafeteria Menus ... 77
Meals in Hospitals and Nursing Homes ... 78
Diet Therapy ... 79
Points To Remember ... 82
Words To Know ... 83
Questions For Review ... 84

9–Tools and Utensils

Tools ... 85
Utensils ... 92
Equipment for Transporting Food and Supplies ... 94
Points To Remember ... 95
Words To Know ... 96
Questions For Review ... 97

10–Food Preparation Equipment

Scales 99
Can Openers 100
Cutting Equipment 102
Mixing Equipment 104
Beverage Equipment 107
Cooking Equipment 108
Points To Remember 113
Words To Know 114
Questions For Review 115

11–Cold Storage, Serving, and Cleaning Equipment

Cold Storage Equipment 117
Holding and Serving Equipment 119
Cleaning and Disposal Equipment 122
Work Stations 125
Points To Remember 127
Words To Know 127
Questions For Review 128

12–Food and Supplies

Food 130
Supplies 133
Receiving 133
Storing Food and Supplies 139
Requisitioning 142
Inventorying 142
Points To Remember 143
Words To Know 145
Questions For Review 145

13–Food Preparation Techniques

Standard Recipes 148
Recipe Use 154
Convenience Foods 157
Work Simplification 158
Food Portioning 161
Plating Food 161
Garnishing 162
Points To Remember 162
Words To Know 164
Questions For Review 164

14–Beverages

Iced Water 167
Coffee 167
Tea 168
Dairy Beverages 169
Fruit and Vegetable Beverages 170
Carbonated Beverages 171
Points To Remember 171
Words To Know 172
Questions For Review 172

15–Cold Sandwiches

Types of Sandwiches 173
Parts of Sandwiches 174
Sandwich Preparation 175
Garnishing and Serving Sandwiches 178
Holding and Storing Cold Sandwiches 178
Points To Remember 179
Words To Know 179
Questions For Review 179

16–Salads

Types of Salads 181
Menu Uses of Salads 183
Parts of a Salad 185
Preparing and Storing Salad Ingredients 186
Convenience Salads 191
Salad Production 191
Serving and Garnishing Salads 192
Holding and Storing Salads 193
Points To Remember 193
Words To Know 195
Questions For Review 195

17–Appetizers

Hors d'oeuvres 197
Canapes 199
Spreads and Dips 200
Cocktails 201
Relishes 201
Salads 202
Soups 202
Production of Appetizers and Hors d'oeuvres 202
Holding and Storing Appetizers and Hors d'oeuvres 202
Points To Remember 203
Words To Know 204
Questions For Review 204

18–Soups and Sauces

Stocks .205
Soups .206
Sauces .209
Gravies .210
Cold Sauces .211
Sweet Sauces .211
Points To Remember .213
Words To Know .213
Questions For Review .214

19–Meat, Poultry, and Fish

Meat .216
Poultry .222
Fish .226
Points To Remember .230
Words To Know .232
Questions For Review .233

20–Eggs and Cheese

Eggs .236
Cheese .244
Points To Remember .248
Words To Know .250
Questions For Review .251

21–Cereals and Pastas

Selecting Cereals and Pastas .253
Menu Uses of Cereals and Pastas .255
Cooking Cereals and Pastas .256
Serving Cereals and Pastas .257
Holding and Storing Cereals and Pastas .257
Points To Remember .258
Words To Know .259
Questions For Review .259

22–Vegetables and Fruits

Selecting Vegetables and Fruits .260
Menu Uses of Vegetables and Fruits .265
Preparation of Vegetables and Fruits .265
Cooking Vegetables and Fruits .266
Serving and Garnishing Vegetables and Fruits .272
Holding and Storing Vegetables and Fruits .272
Points To Remember .273
Words To Know .274
Questions For Review .275

23–Breads

Types of Bread 276
Ingredients Used in Breads 277
Menu Uses of Breads 281
Mixing and Baking Breads 281
Convenience Bread Products 288
Serving Breads 288
Holding and Storing Breads 288
Points To Remember 288
Words To Know 289
Questions For Review 290

24–Desserts and Cookies

Types of Desserts 293
Convenience Desserts 296
Preparing Desserts 296
Garnishing and Serving Desserts 300
Holding and Storing Desserts 301
Types of Cookies 301
Menu Uses of Cookies 302
Convenience Cookie Products 302
Making Cookies 302
Serving Cookies 305
Holding and Storing Cookies 305
Points To Remember 305
Words To Know 307
Questions For Review 307

25–Cakes and Icings

Types of Cakes 309
Menu Uses of Cakes 310
Convenience Cake Products 310
Preparing Cakes 311
Frostings, Icings, and Fillings 316
Decorating Cakes 320
Cutting and Serving Cakes 326
Points To Remember 327
Words To Know 328
Questions For Review 328

26–Pastry and Pies

Pastry Products 330
Menu Uses of Pastry 331
Pastry 332
Fillings 336
Toppings 338
Holding and Storing Pastries and Pies 339
Garnishing and Serving Pastries and Pies 339
Points To Remember 340
Words To Know 341
Questions For Review 341

27–Basic Service Skills

Developing Personal Skills 344
Human Relations 347
Cooperating with Co-workers 347
Understanding Customers 348
Merchandising the Menu 352
Managing Serving Responsibilities 356
Points To Remember 358
Words To Know 359
Questions For Review 359

28–Sidework

Routines 362
Duties 364
Points To Remember 370
Words To Know 371
Questions For Review 371

29–Styles of Service

Food Serving Styles 372
Table Settings 376
Points To Remember 379
Words To Know 380
Questions For Review 380

30–Table Service

Welcoming and Seating Customers 383
Presenting Menus to Guests 384
Writing, Placing, and Picking Up Orders 384
Serving Food and Beverages 389
Points To Remember 393
Words To Know 394
Questions For Review 394

31–Counter and Self Service

Counter Service 397
Self-service 399
Points To Remember 405
Words To Know 406
Questions For Review 406

32–Other Types of Food Service

Banquet Service 409
Catered Service 411
Tray Service 412
Food Showmanship 414
Points To Remember 417
Words To Know 418
Questions For Review 418

33–Money Handling

Computing The Check 421
Presenting The Check 421
Making Change 423
Using a Cash Register 423
Handling Tips 424
Managing Counter Items 426
Points To Remember 426
Words To Know 427
Questions For Review 427

34–Management Responsibilities

Desirable Traits 430
Organizational Goals 430
Policies and Procedures 431
Laws and Codes Related to Food Service Operations 434
Points To Remember 436
Words To Know 437
Questions For Review 438

35–Cost Control

Menus - The Framework of Cost Control 440
Standardized Recipes 444
Points To Remember 448
Words To Know 448
Questions For Review 449

36–Buyers, Receivers, and The Storeroom

Purchasing Foods and Consumable Supplies 450
Receiving, Inspection, and Storage 456
Storeroom Control 457
Points To Remember 458
Words To Know 459
Questions For Review 459

37–Finances and Recordkeeping

Financial Stability of Food Service 461
Financial Statements 462
Break-even Analysis 464
Employee Records 465
Computers in Food Service 468
Points To Remember 471
Words To Know 472
Questions For Review 473

38–Personnel and Production Management

Personnel Management 475
Employee Work Schedules and Assignments 480
Controlling Labor Costs 480
Production and Quality Control 482
Points To Remember 484
Words To Know 485
Questions For Review 486

39–Merchandising and Public Relations

Merchandising Food Service - Outside Merchandising 487
Merchandising Food Service - The Inside View 492
Special Merchandising Techniques 494
Public Relations 494
Customer Relations 495
Points To Remember 496
Words To Know 497
Questions For Review 497

References 498

Index 499

Preface

Food service is big business. The food service industry is the nation's largest retail employer. It is also one of the fastest growing industries in the United States. The National Institute of the Food Service Industry estimates that 250,000 employees are needed each year for new positions. Positions are available in restaurants, schools, institutions, and hospitals.

Career opportunities in food service are unlimited, ranging from beginning jobs open to the inexperienced, to the highest managerial positions requiring extensive experience and/or training.

Occupational Education Series

Food Production, Management, and Services is part of an occupational education series which focuses on a broad range of employment opportunities. Each title in the series addresses one career cluster. The instructional materials designed for each cluster include four components:

- Reference Book. Provides information needed by employees in the occupational area. Each chapter begins with Competencies to Develop and Objectives to Achieve. Within the text, italicized, bold-faced vocabulary terms are followed by a definition or explanation. Illustrations of equipment and procedures aid student learning. The content of each chapter is summarized in Points to Remember. The vocabulary terms are repeated in a list of Words to Know. Technical terms and concepts may also be located quickly by using the index. Questions for Review are provided for the student as a self-test.
- Curriculum Guide. Provides a variety of teacher information. Teaching strategies, teaching aids, laboratory management guides, and test questions, coordinated with the chapters in the reference book.
- Student Activity Book. Provides a variety of pencil-and-paper activities. Activities are correlated with chapters in the reference book.
- Student Aids. Provides information at third to fourth grade reading level and simplified pencil-and-paper activities.

This series of coordinated components is designed to meet a variety of instructional needs. The needs of both cooperative education and laboratory education students can be met. Both regular and special needs students can be accommodated.

Reference Book

The *Food Production, Management, and Service* reference book is concentrated on the skills and attitudes needed for successful employment in the food service industry. It provides basic and current information on many types of food service occupations.

The book is divided into 39 chapters grouped into seven parts, each covering a major idea in food production, management, and service. Each part of the book is based on specific concepts of food production, management, and service.

Part 1 introduces food service career opportunities. It provides an overview of the food service industry and an introduction to food service careers. It identifies jobs available for beginners as well as opportunities for advancement.

Part 2 covers basic concepts in food service. It introduces safety, emergency procedures, sanitation, and nutrition.

Part 3 provides information about the equipment, food, and supplies used in food service operations. The chapters in this part include many illustrations.

Part 4 on food production provides information on basic food preparation techniques. It also provides information on preparing a variety of types of foods.

Part 5 is on customer service. It introduces various styles of service including counter and takeout service, tray line service, seated service, and special types of food service. The final chapter in this part is devoted to money handling.

Part 6 is on food service management. It covers management responsibilities, menus, merchandising, personnel management, cost control, finances, and recordkeeping.

No book can provide all the information needed for a career in food production, management, and service. Students should be encouraged to study various topics more intensively, to use references suggested in the teachers guide, and to apply the information in either laboratory or on-the-job training. Hands-on experience either on the job or in a food service laboratory is essential to understanding the concepts of food production, management, and service.

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The people listed below and on the following page made special contributions to the development of this publication.

Members of the Advisory Committee provided input regarding content and reviewed drafts of the materials. The advisory committee members included the following:

Don George
Texas Restaurant Association
Austin

Anita Hinojosa
City Home Economics Supervisor
Corpus Christi

Sandra Honeycutt
Home Economics Teacher
Evans Junior High
Lubbock

Barbara Ware
Specialist, Occupational Education
Dallas ISD

David K. Hayes
Director and Associate Professor, Restaurant and Institutional Management
Texas Tech University
Lubbock

Julia Summers
Home Economics Dept.
Tarleton State University
Stephenville

Field reviewers included Vocational Home Economics Education teachers representing schools of varying sizes across the state who reviewed drafts of the materials and provided input regarding content.

Texas reviewers and the schools they represent included the following:

Imogene Behannon
Henderson High School

Odell Chism
Skyline Center

Barbara Friedson
Tom C. Clark High School

Phyllis J. Harbin
J. M. Hanks High School

Becky Heard
Pecos High School

Terri A. Jez
Sante Fe High School

Charlotte Lee
Moody High School

Jacqueline Mathews
Centerville High School

Sarita C. Ochoa
Lamar Middle School

Ann H. Pogue
South Grand Prairie High School

Louise M. Smith
Cooper High School

Deborah Stager
West Brook 9th

Jeanette Young
Levelland Junior High

Nancy S. Chafin
New Braunfels High School

Geralyn Cray
Davis High School

Cloteal L. Hall
Huntsville High School

Glenda Harris
Roosevelt High School

Diann Howard
Flour Bluff High School

Peggy Kelly
Lockhart High School

Joyce Leighman
Stephen F. Austin Junior High

Laura Gene Newburn
Bullard High School

Oralia Moran Perez
Hanna High School

Patsy S. Pundt
Borger High School

Lou Nell Spurrier
McKinney High School

Marsha Walker
Waco Regional School for the Deaf

Texas Education Agency Area Home Economics Specialists who reviewed the materials included the following:

Virginia Chancellor
Area V, Denton

Sharon Glasscock
Area III, Houston

Bobbie Moore
Area X, Corpus Christi

Phoebe Denny
Area VII, Austin

Cindy Gruner
Area II, Big Spring

Sue Stanford
Area I, Plainview

Rex W. Castle, editor, Michael Kennedy, and Rhonda Gilliam, graduate research assistants, edited this material.
Susan Owens and David Harmon produced the artwork.
David Harmon designed the cover.
Mary Helen Mayes and Sharolyn Rogers, graduate research assistants, assisted in development of this material.

1

Chapter One
The Food Service Industry

COMPETENCY TO DEVELOP

- Identify competencies needed to be an effective food service employee.

OBJECTIVES TO ACHIEVE

- Describe the food service industry.
- Describe the types of food service units.
- Point out advantages and disadvantages of food service work.

Food service is one of the largest industries in the United States. There are about 500,000 food service establishments from coast to coast. About 350,000 of these are commercial food service businesses open to the public. The others include food service for industry, medical facilities, military bases, educational institutions, and transportation service units.

Food Service Industry

The ***food service industry*** employs about eight million full-time workers and another one million part-time workers. The food service industry is the single largest employer of young people in the nation. Nearly one-fourth of all its workers are between 16-19 years of age. (Only nine percent of the total United States work force is made up of teenagers.) Sixty-six percent of all food service employees are female compared to 42 percent in the total work force. More women and minorities hold jobs in management and supervision in food service than in most other industries.

Food service is one of the nation's fastest growing industries. Americans now eat one out of every three meals away from home. Experts predict that ratio will increase to one out of two by 1990. Americans now spend 40 percent of their food dollars away from home. In 1980 food service sales reached $112.2 billion. The National Restaurant Association predicts that the percent of personal food dollars spent outside the home will increase to 50 percent by 1990.

The more meals people eat away from home, the more food service job opportunities will be available. Experts predict 250,000 new food service jobs annually for the next 10 years. A wide range of jobs is available beginning with entry-level positions that provide opportunities to move up through on-the-job training or additional education.

Changes in American life have created an increased demand for food service. Our nation's prosperity has made it possible for most people to eat out. Even in periods of inflation people still eat out, even though they may eat at less expensive restaurants. As more women are employed outside the home, adults have less time for food preparation at home. Emphasis on leisure activities has increased the demand for food service in vacation and resort areas and on airlines. As more people travel for business and pleasure, the need for food service in hotels and motels has increased. Longer life span and improved health care have increased the need for food service in medical facilities.

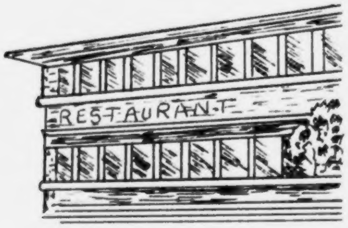
DID YOU KNOW THAT. . .

- each year American families eat one out of every three meals (750 million meals each week) away from home?
- restaurants employ 1,000,000 waiters and waitresses, 600,000 cooks, 350,000 kitchen helpers, and 200,000 fountain and counter workers?
- Americans spend 25 billion dollars each year for meals away from home?
- food service is the third largest industry in the country? Only the retail sales and automobile industries are larger.
- there is one food service establishment for every 540 persons in the United States?
- each year food service needs 250,000 new employees?

Food Service Units

A ***food service unit*** provides ready-to-eat food for customers, residents, employees, or patients. Units differ as to where the food is prepared and how it is served. The facility may offer a choice of only a few items or an extensive choice of menu items. Some food service units both prepare and serve food. Others are central kitchens that prepare food that is transported to another location for serving. Rather than prepare food, some food service units serve food that is prepared at another location or by a manufacturer.

Food may be served to customers by a food service employee or selected by customers themselves. ***Seated-service*** units serve food to individuals seated at tables, booths, or sit-down counters. Institutions often utilize units serving patients or guests in their rooms. ***Self-service*** units allow customers to serve themselves in a cafeteria line, at a buffet, at a take-out service, at a counter or window, or from a vending machine. In self-service units, little or no help is provided by food service personnel. Self-service and seated-service may be combined. A restaurant may provide a self-service salad bar and seated-service for the rest of the meal. ***Quick-service units*** are organized to provide fast service, usually from a limited menu. They may provide self, seated, or take-out service.



Food service units also vary in who they feed. A commercial ***restaurant, cafeteria***, or ***fast food establishment*** serves food to the general public. A ***catering unit*** usually serves food to guests at a special function such as a wedding, party, or business entertainment function. ***Central kitchens*** or ***commissaries*** prepare food to be served at a different location by schools, airlines, ships, businesses, or vending machines. ***Institutional feeding units*** serve students, patients, or residents in schools, hospitals, nursing homes, military bases, prisons, and Salvation Army and Red Cross facilities. ***In-plant feeding units*** provide food service for employees in businesses, factories, banks, and similar facilities where other types of food service are not readily available.

The following chart will help you better understand the various types of food service units.

FOOD SERVICE UNITS

Type Food Service Unit	Menu Choice	Location of Service	Type of Service	Persons Served
Restaurant, seated service	Extensive	On-premises	Seated	General public
Restaurant, quick-service	Limited	On-premises	Seated/ counter/ takeout	General public
Restaurant, self-service	Extensive	On-premises	Trayline/ limited seated	General public
Catering unit	Extensive (specified for each function)	On- or off-premises	Seated/ buffet	Guests of special function
Central kitchen or commissary	Limited	Off-premises	N/A	Students, patients, passengers, customers, vending machine users
Institutional feeding unit (schools, hospitals, prisons, homes for elderly, military bases, Red Cross, Salvation Army)	Limited	On- or off-premises	Seated/ trayline/ tray and mobile cart	Students, patients, prisoners, residents, disaster victims
In-plant feeding unit	Limited	On- or off-premises	Trayline/ vending/ counter/ seated service	Employees

Finally, food service units vary in type of ownership. A unit may be one of the following types:

- ***Sole proprietorship*** refers to a business that is owned and operated by a single person.

- A ***partnership*** indicates that the business is owned by two or more persons.

- A ***corporation*** is a business owned by stockholders doing business together as a single legal entity.

Two other terms commonly used when describing the ownership and operation of a food service unit are franchise and chain. A ***franchise*** is an agreement which assigns an individual, partnership, or corporation the right to use a name or formula in return for a fixed fee or a percentage of sales income. Professional assistance, such as site planning, construction plans, financial counseling, and national advertising may be provided as part of the agreement. A ***chain*** or ***multi-unit operation*** refers to several establishments with the same name or different names but the same ownership whether individual, partnership, or corporation.

Food Service Work

Food service jobs, like most jobs, have both advantages and disadvantages. Individuals interested in food service jobs should carefully consider the advantages and disadvantages of food service work.

ADVANTAGES

Among the advantages of food service jobs are:

- ***Many types of food service jobs are available***. A food service worker may work in a fast food restaurant, a family restaurant, a gourmet restaurant, a school lunchroom, a hospital dietary department, a commercial cafeteria, a catering unit, or a company that provides food for schools, hospitals, airlines, or vending machines. Jobs range from entry-level to management-level. Educational requirements range from no diploma required to high school diploma to completion of trade school to college degree required.

- ***Salaries and fringe benefits are similar to other industries***. Pay varies depending on job level. Benefits may include paid vacations, bonuses, pension plans, hospital and group insurance, and profit sharing. Meals and uniforms are often furnished.

- ***Part-time jobs and flexible schedules are available***. Typical working hours vary from 40-48 hours a week. Short hours, broken shifts, early and late shifts can be arranged.

- ***Food service workers are in demand.*** Jobs for food service workers are constantly available in all communities and the work is steady. The food service industry is growing throughout the country.

- ***Working atmosphere is usually pleasant.*** Food service units are often modern and attractive.

- ***Opportunities for advancement exist.*** Entry-level employees can advance to higher-level positions through on-the-job training or additional education. Many companies provide their own training. Job advancement is often quite rapid.

- ***Management and ownership opportunities exist for ambitious persons.*** Management and franchise opportunities are available to experienced persons. Ownership requires an investment of money and a willingness to work hard.

DISADVANTAGES

Frequently mentioned disadvantages of jobs in the food service industry include:

- ***Work hours may be inconvenient.*** Food service workers frequently work at night and on weekends and holidays.

- ***Work is often done under pressure.*** During peak serving periods a fast pace is necessary. Customers may contribute to work pressure if they are demanding and irritable.

- ***The work may cause fatigue.*** Some food service workers must carry heavy trays and pots and pans. Fatigue may be increased by hard floors, hot kitchens, and limited space. Time pressure also causes fatigue.

- ***Pay for entry-level positions may be low.*** In beginning jobs, usually only the minimum wage is paid. In some positions, tips increase basic wages.

Points To Remember

- Food service is one of the nation's largest and fastest growing industries.

- Changes in American life continue to increase the demand for food service.

- Types of food service units include restaurants, cafeterias, fast food establishments, catering units, central kitchens, institutional units, and in-plant feeding units.

- Food service units vary in several ways:
  - number of menu choices provided
  - where the food is prepared and served
  - how the food is served
  - who is fed
  - type of ownership.

- Food service jobs have both advantages and disadvantages.

Words To Know

cafeteria
catering unit
central kitchen
chain operation
commissary
corporation
fast food establishment
franchise
food service industry
food service unit
in-plant feeding unit
institutional feeding unit
multi-unit operation
partnership
quick-service unit
restaurant
seated-service
self-service
sole proprietorship

Questions For Review

1. Name five statistical facts that describe the food service industry.

2. What changes in American life have increased the demand for food service?

3. In what five ways do food service units vary?

4. How do seated-service and self-service differ?

5. Who is fed by each of the following types of food service units?
   a. commercial establishment
   b. central kitchen or commissary
   c. institutional feeding unit
   d. in-plant feeding unit

6. What are the three types of business ownership and how do they differ?

7. How is a franchise different than a chain or multi-unit food service operation?

8. What are five advantages of food service work?

9. What are three disadvantages of food service work?

2

Chapter Two
Food Service Careers

COMPETENCIES TO DEVELOP

- Identify competencies needed to be an effective food service employee.
- Describe personal qualities which lead to job success in food production, management, and services.

OBJECTIVES TO ACHIEVE

- Describe the two main areas of a food service operation.
- Identify food production, management, and service career opportunities.
- Categorize food production, management, and service career opportunities as unskilled, semi-skilled, skilled, management, or related opportunities.
- Describe the experience, training, and/or education needed to qualify for specific food service careers.

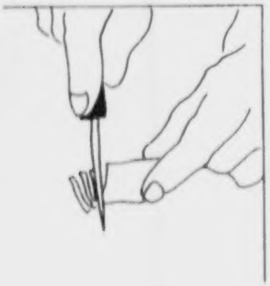
A food service career can be developed in any type food service operation and may take a variety of directions. Food service jobs may be found in restaurants, fast food establishments, cafeterias, catering establishments, or institutions. Job descriptions may be found in the *Dictionary of Occupational Titles*. However, despite the variety of food service establishments, there are many similarities in the jobs available.

Areas of Food Service Operation

In general, food service jobs are located either in the back-of-the-house or in the front-of-the-house. Different types of food service jobs are available in each area.

BACK-OF-THE-HOUSE

The ***back-of-the-house*** is the area of the establishment not usually seen by customers. This is the area where food is received, stored,



and prepared. It includes the kitchen, pantry, storerooms, and dishwashing area. Back-of-the-house jobs may be divided into three types: support, production, and control. Jobs in these areas include:

- ***Support jobs*** - dishwasher, pot washer, silver polisher, porter, sanitation supervisor, and steward.

- ***Production jobs*** - vegetable preparer, meat cutter, pantry worker, cook, baker, and chef.

- ***Control jobs*** - food runner, receivingroom attendant, storeroom attendant, storeroom supervisor, food checker, and purchasing steward.

FRONT-OF-THE-HOUSE

The ***front-of-the-house*** is the area seen by guests. This is the area where food is sold, served, and consumed. In most food service establishments, it includes the reception area, dining rooms, and restrooms. In some units, the front-of-the-house operations are handled by vending machines, automats, or takeout service. In institutional food service units, the front-of-the-house operations vary. For example, cart and tray service is used in most hospitals. Cafeteria or counter service is used in most schools.

Front-of-the-house jobs include those in service and management. These jobs include:

- ***Service jobs*** - set-up personnel, dining room attendant, waiter/waitress, cocktail server, dining room captain, bartender, cashier, and host/hostess.

- ***Management jobs*** - dining room manager, maitre d'hotel, banquet manager, food and beverage manager, food and beverage controller, wine steward, and executive chef.

Influences on Staff Needs

The type of food service operation influences the duties and responsibilities of each employee. Three factors influence the staff needed:

- ***The size operation.*** The number of customers and the number of meals served influence the size staff needed in both the front-of-the house and the back-of-the-house.

- ***The menu.*** The number of items on the menu and how they are prepared affect the number of employees needed and their duties and responsibilities. The menu determines the skills needed by food preparation employees.

- ***The service.*** The type and quality of service vary from simple counter service to elaborate table service. The service affects the number and type of employees needed and the tasks assigned to those employees.

Types of Jobs

The duties and responsibilities assigned an employee influence the amount of experience, training, and/or education required. However, especially in small food service units, employees may sometimes be assigned duties and responsibilities that overlap job levels. In general, food service jobs can be classified as unskilled, semi-skilled, skilled, or supervisory/management. Some related opportunities are also available.

UNSKILLED JOBS

Unskilled food service jobs require the lowest level of job responsibility and provide the lowest level of pay. There are no specific educational requirements for unskilled jobs. These jobs usually require physical strength for lifting, running, mopping, etc. Unskilled jobs can be learned in a few days on the job. They provide limited opportunities for advancement. Examples of unskilled jobs in food service include:

Back-of-the-House

Kitchen helper
Coffee maker
Baker helper
Dishwasher
Storeroom assistant

Front-of-the-House

Dining room attendant
Cafeteria counter attendant
Bus person

SEMI-SKILLED JOBS

The second step on the food service career ladder is ***semi-skilled*** jobs. These jobs require more responsibility and offer more pay than unskilled jobs. Skills for semi-skilled jobs may be learned on the job or in training programs in high school or community college. A combination of both experience and education is preferable. Examples of semi-skilled food service jobs include:

Back-of-the-House

Cook helper
Cook, specialty
Cook, head
Assembler
Kitchen clerk
Pantry worker
Sandwich maker
Dietetic assistant

Front-of-the-House

Waiter/waitress, informal
Waiter/waitress, formal
Waiter/waitress, outside food delivery
Waiter/waitress, room service
Waiter/waitress, takeout
Bartender
Food tabulator
Cashier

Unskilled and semi-skilled jobs are sometimes called ***entry-level jobs***. Entry-level jobs require little or no training or specialized education.

SKILLED JOBS

Greater artistic freedom and more responsibility are available to ***skilled*** food service workers. Skilled jobs pay well and usually require professional training. Examples of skilled food service jobs include:

Back-of-the-House	***Front-of-the-House***
Chef	Waiter/waitress, head
Dietetic technician	Host/hostess

SUPERVISION AND MANAGEMENT JOBS

Jobs in supervision and management are at the top of the food service career ladder. Supervision/management jobs may be described at three levels:

- ***Supervision*** is concerned with overseeing daily operations and with implementing decisions made at a higher level.
- ***Middle management*** is responsible for implementing policy and with making routine operational decisions.
- ***Top management*** is primarily concerned with making finance and policy decisions.

A job as ***supervisor*** may require graduation from a one- or two-year community college training program. A position as a dietitian requires a four-year degree. Supervisors are usually in demand and their pay is competitive with that in other industries. Supervisors usually work a standard work week and most are paid on an hourly basis. Generally, work hours are the same as those of the production staff, and often include evenings, weekends, and holidays. A supervisor may or may not earn overtime for extra hours. Supervisory positions usually require that uniforms be worn.

Duties of a supervisor involve constantly monitoring production and service. The supervisor performs whatever routine tasks are essential to successful operation. Duties sometimes include scheduling and training employees. Examples of supervisory positions in food service include:

Back-of-the-House	***Front-of-the-House***
Dietitian	Host/hostess, restaurant or coffee shop
Dietitian, therapeutic	Maitre d'hotel
Food service supervisor	
Kitchen steward	
Kitchen supervisor	
Steward	
Steward, banquet	

Middle management (mid-management) positions require a combination of ability and training. A workweek of 60-70 hours is fairly common. A manager's work schedule almost always includes weekends and holidays. Managers are paid a weekly or monthly salary. A manager usually has an office, but typically spends only a small amount of time there. Examples of food service mid-management positions include:

- Director, food and beverage
- Manager, catering
- Manager, cafeteria or lunchroom
- Manager, restaurant or coffee shop
- Manager, traveling
- Manager, trainee.

Top management positions do not always require a food service background, although it is preferable. A top level food service manager may hold a bachelor's degree in management, business administration, or a related field. The food service manager may be a graduate of a school or college teaching hotel, restaurant, and institutional manage-ement. Top management positions offer high pay and require experience at lower levels of management. Top management positions usually do not have set hours and may require travel.

Related Opportunities

In addition to jobs directly involved in food production, management, and service, a variety of ***related opportunities*** might be considered. Related job opportunities are available with food processors (manufacturers), food suppliers (purveyors), food service equipment manufacturers, advertising agencies, and consulting and management companies. These opportunities might involve food processing, equipment design, packaging, sales, advertising, consulting, or management.

Personal Characteristics Needed

Food service jobs require a variety of knowledge and skills. All food service jobs require an abundance of energy. Most also require knowledge of food and food items. General skills needed include human relations skills, math skills, and communications skills.

Human relations skills are needed by all food service employees to work effectively as members of the food service team. Front-of-the-house employees also need skill in dealing effectively with customers. These employees need good judgment and an even temper.

Many food service employees need math skills. Cooks use math skills in reading and adjusting recipes. Waiters and waitresses, cashiers, headwaiters and headwaitresses, and hosts and hostesses use math skills in tabulating customer checks and in operating a cash register. Food service managers use math skills in budgeting, recordkeeping, figuring payrolls, and pricing menu items.

Communication skills are also needed by most food service employees. These skills include reading, writing, nonverbal communication, and speaking. Communication skills are used in reading recipes, writing orders, and communicating with co-workers and customers.

Points To Remember

- There are similarities in food service jobs regardless of the type food service establishment.
- The two main areas of a food service establishment are the front-of-the-house and the back-of-the-house.
- Three factors which influence the staff needed in a food service establishment are the size of the operation, the menu, and the type and quality of service.
- Food service operations employ unskilled, semi-skilled, and supervisory/management personnel. Unskilled and semi-skilled jobs are also called entry-level jobs. Related job opportunities are also available.
- Most food service jobs require human relations skills, math skills, and communication skills. Most food service jobs require abundant energy and knowledge of food and food items.

Words To Know

back-of-the-house
control jobs
entry-level jobs
front-of-the-house
middle management
management jobs
production jobs
related opportunities
semi-skilled
skilled
service jobs
supervision
supervisor
support jobs
top management
unskilled

Questions For Review

1. What are the two main areas of a food service establishment? What facilities and responsibilities are a part of each of these areas?
2. List three food service jobs in each of the following categories:
   a. support jobs
   b. production jobs
   c. control jobs
   d. service jobs
   e. supervision/management jobs
3. What three factors influence the staff needed in a food service operation?

[redacted]

4. List two back-of-the-house and two front-of-the-house jobs for each level listed below.

Skill Level	**Back-of-the-House**	**Front-of-the-House**
Unskilled		
Semi-skilled		
Skilled		
Supervision/ Management		

5. Name three types of jobs related to the food service industry.

6. Describe three skills required in most food service jobs.

3

Chapter Three
Safety

COMPETENCY TO DEVELOP

- Maintain high safety standards in food preparation, service, and cleanup tasks.

OBJECTIVES TO ACHIEVE

- Identify government regulations which apply to food service establishments.
- Summarize safety obligations of food service management.
- Summarize safety obligations of food service employees.
- Identify major causes of food service accidents.
- Outline procedures for preventing accidents in the food service facility.

Safety is essential in the food service facility. Government, management, and employees all contribute to the safety of a food service operation.

Government Regulations

City, state, and federal governments establish and enforce minimum safety standards in food service facilities. These regulations are enforced through permits, licensing, and inspection.

The purpose of the federal ***Occupational Safety and Health Act (OSHA)*** of 1970 is to assure safe, healthful working conditions for employees. Under this act, an employer must keep the place of employment free of recognized hazards.

Management Responsibilities

Overall responsibility for safety in the food service facility belongs to management. Food service management is responsible for the safety of both food service employees and customers. Management must:

- provide a safe facility
- establish safety rules and procedures

- provide employees with safety training
- enforce safety rules and regulations
- provide fire extinguishers and first aid kits.

Employee Responsibilities

Every food service employee must help maintain safety standards to prevent accidents. Employees can do their part to ensure safety by:

- observing safety rules and procedures
- identifying and reporting hazards
- knowing the location of emergency equipment and how to use it
- knowing emergency procedures and escape routes.

Accident Causes

Accidents are caused, they do not just happen. The most common food service accidents and their causes are:

Food Service Accidents	**Causes**
Falls	Spills Slippery or wet floor Obstructions Poor lighting Failure to use safe ladder Over-reaching Running or horseplay
Cuts	Dull knives Improper use of cutting equipment Broken glass or dishes Sharp corners or edges Falling objects
Burns, shocks, explosions	Touching hot surfaces and objects Scalding liquids and food Hot grease Flammable materials near open flame Loose fitting garments near flame Careless disposal of smoking materials Use of wrong fire extinguisher Faulty electrical equipment Improper handling of electrical cords and appliances Careless lighting of gas stoves and ovens
Strains and bruises	Overloading trays Lifting heavy objects Carrying loads incorrectly Horseplay and practical jokes Colliding with others Colliding with objects

Accidents are caused by either unsafe conditions or unsafe acts. Unsafe conditions should be corrected or reported whenever they are observed. Warning signs should be posted, when needed, to alert others until the condition can be remedied.

Unsafe acts occur when workers do not pay attention to what they are doing, get in too much of a hurry, or do not know and follow rules. Some workers even appear to be ***accident-prone***. These workers have many more accidents than others. Their accidents may be caused by carelessness or lack of physical coordination.

Fatigue can cause accidents. ***Fatigue*** is weariness caused by labor or exertion. Its cause may be physical, mental, or emotional.

Physical fatigue results from heavy work or physical activity. Food service workers may feel physical fatigue from standing and walking or from lifting heavy pots and pans or trays.

Emotional or mental fatigue may result from feelings about one's self, one's job, or one's personal life. When people feel bad about themselves or toward others, they are likely to feel tired and are more likely to have accidents.

To avoid fatigue, follow these suggestions:
- Get plenty of sleep.
- Consume a nutritious diet.
- Practice good posture.
- Take periodic rest breaks.
- Develop good relations with co-workers.
- Use time- and energy-saving work methods.
- Develop a positive attitude toward work.
- Try to leave your personal problems at home.

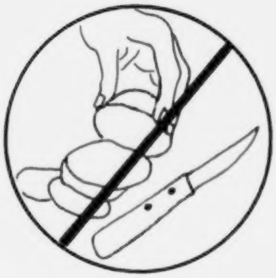
Preventing Accidents

Falls, cuts, burns and shocks, fires and explosions, and strains and bruises are common types of accidents in the food service industry. Most of these accidents can be prevented if employees know and follow safety procedures.

PREVENTING FALLS

Falls are responsible for more injuries in food service than anything else. Employees can avoid most falls by following these simple rules:
- Keep floors clean and dry.
- Wipe up spills immediately.
- Walk, do not run.
- Wear low-heeled, comfortable work shoes with rubber soles.
- Keep work areas and traffic lanes clear.
- Use a sturdy stepladder, never a chair, for reaching objects on high shelves.
- Avoid over-reaching.
- Watch where you are going, especially when going through doors or around corners.
- Correct or report floor hazards and obstructions.

PREVENTING CUTS



Most cuts in food service result from the improper use of knives. To avoid knife cuts, follow these rules:

- Use the correct knife for the job.
- Keep knives sharp.
- Pick up knives by the handle.
- Use a cutting board when possible.
- Cut away from the body and fellow workers.
- Curl the fingers like a claw to keep them away from the knife blade.
- Do not use knives for prying lids, opening cans, cutting paper and string, or sharpening pencils.
- Keep hands free from grease when using a knife.
- If a knife falls, do not try to catch it. Get out of its way.
- Always carry a knife with the point down and the cutting edge away from the body.
- Do not leave knives laying on work tables or in the sink.
- Wash knives separately immediately after use.
- Never leave knives in a sink of water where they cannot be seen.
- Turn the sharp edge away from the body when wiping or cleaning a knife.
- Store knives in a knife rack or in slots in a drawer.

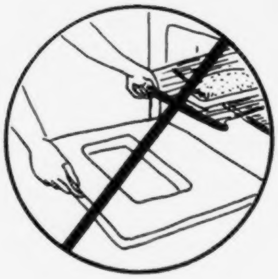
To avoid cuts from cutting equipment, observe these precautions:

- Avoid wearing loose clothing or dangling jewelry.
- Pay careful attention to the task being done.
- Be sure cutting equipment is sharp.
- Use safety guards when using cutting or slicing machines.
- Operate cutting equipment correctly.
- Use tampers, rather than fingers to push food into choppers and grinders.

To avoid cuts from broken glass or dishes or from cans, observe these rules:

- Discard chipped or cracked glasses and dishes.
- Sweep up broken glass or dishes immediately.
- Pick up glass splinters with a damp paper towel and discard.
- Do not pick up broken pieces of glass with hands.
- Put broken glass in a separate trash container or wrap in newspaper before placing in trash container.
- Never try to locate broken pieces of glass in dishwater. Drain the sink instead.
- Carry and handle glass and dishes carefully.
- Discard open cans and their lids promptly.

PREVENTING BURNS AND SHOCKS



Even small burns are painful and take a long time to heal. To avoid burns from hot equipment, food, and liquids, observe these safety precautions:

- Wear close-fitting clothing in the food preparation area.
- Use thick, *dry* hot pads or mitts when handling hot pans and dishes.
- Lift utensil covers away from the face to let the steam escape before removing.

- Be sure all the steam is gone before opening pressure cooker.
- Turn pan handles away from the front of the range to prevent tipping.
- Keep flammable materials, such as towels, away from open flames.
- Get help to handle heavy, hot containers.
- Avoid over-filling containers with hot liquids or food.
- Open oven door slightly to let heat and steam escape before bending face and arms over it.
- Pull oven rack out, then remove container. Do not reach into oven.
- Never put cold, wet food into hot grease. It may spatter or boil over and catch fire.

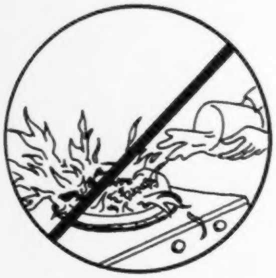
Food service equipment may be the source of electrical shocks. To avoid shocks, observe these precautions:

- Be sure electrical cords are in good repair.
- Never pull on an electrical cord when disconnecting from wall outlet.
- Always unplug electrical equipment from the wall outlet first, then disconnect the cord from the equipment.
- Never handle electrical equipment with wet hands or while standing in water.
- Wear rubber-soled leather shoes to prevent electrical shocks or burns from hot spills.
- Be sure an appliance is turned off before it is plugged into a wall outlet.
- Unplug electrical equipment before washing it.
- Report any faulty electrical equipment promptly.

PREVENTING FIRES AND EXPLOSIONS

The kitchen is the most common area for fire and explosions in food service establishments. Most fires and explosions can be easily prevented. Many food service kitchen fires are caused by grease. Grease, oil, and fat catch fire easily, and the fire spreads rapidly. To prevent grease fires observe these rules:

- Keep range, ovens, and hoods free from grease.
- Do not overheat fats. Use equipment with a thermostat or check temperature with a thermometer.
- Never leave hot fat unattended.
- Do not overfill utensil with fat or oil or add cold wet food to hot fat.
- Wipe up spilled oil or fat with a paper towel, then clean the surface with detergent and water.
- Cover fat spilled on the floor with salt, then clean up.
- Never use water or flour to put out or douse a grease fire.
- Never try to carry a burning pan to another location.

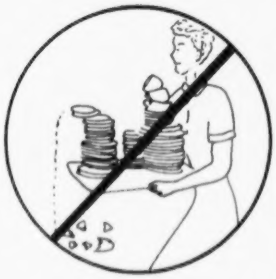


Gas as a cooking fuel is safe if properly used. However, if gas is confined in a small area without sufficient air, it will explode when ignited. To avoid gas explosions, observe these precautions:

- Check pilot lights and all burners before lighting the range, oven, or or other gas appliances.
- Turn on exhaust fan before lighting gas range, oven, or other gas appliances.
- Always open the oven door for a moment to allow any gas to escape before striking a match.

- Strike the match before turning on the gas when lighting the oven.
- If there is a smell of gas upon entering the kitchen, check the pilot lights.
- If pilot lights are lit, and there is still a smell of gas, open the windows and call the gas company.

PREVENTING STRAINS AND BRUISES



Strains and bruises are usually the result of carelessness. Strains usually occur in the lower back. Strains are caused by using incorrect methods for lifting heavy objects. Once the back has been weakened by a strain, it can easily be injured again. People can usually prevent back strain by observing these rules for lifting:

- Do not overload trays and carts.
- Balance weight on trays carefully.
- Carry trays correctly.
- Lift heavy objects by keeping the load close to the body. With the feet apart and knees bent, raise the load gradually, and straighten the knees slowly. Keep the back straight.
- Set objects down by reversing the method used for lifting. Keep the back straight. Keep the load close to the body, with the feet apart and knees straight, lower the load gradually, bending the knees slowly.
- Get help to lift and carry heavy objects such as large pots of food or bags of flour.
- Store heavy items on lower shelves.

Bruises can be avoided by paying careful attention to what one is doing. To avoid bruises watch where you are going and what you are doing.

Points To Remember

- Government, management, and employees all contribute to the safety of a food service operation.
- The federal Occupational Safety and Health Act (OSHA) of 1970 requires an employer to keep the place of employment free of recognized hazards.
- Management must provide a safe facility, establish safety rules and procedures, provide employees with safety training, enforce safety rules and regulations, and provide fire extinguishers and first aid kits.
- Employees can help ensure safety in the food service establishment by observing safety rules and procedures, and identifying and reporting hazards.
- The most common food service accidents are falls, cuts, burns, shocks, explosions, strains, and bruises.
- Accidents are caused by either unsafe conditions or unsafe acts. Fatigue and stress make accidents more likely to occur.
- Observance of safety rules aid in avoiding accidents.

Words To Know

accident-prone	Occupational Safety and Heatlh Act Act (OSHA)
emotional fatigue	mental fatigue
fatigue	
physical fatigue	

Questions For Review

1. How are government safety standards enforced?
2. What are five safety responsibilities of food service management?
3. What are four safety responsibilities of food service employees?
4. List four common accidents in food service establishments and three causes of each.
5. What are five ways a food service employee can avoid fatigue?
6. List five ways to avoid each of the following types of accidents.
    a. falls
    b. cuts
    c. burns and shocks
    d. fires and explosions
    e. strains and bruises

4

Chapter Four
Emergency Procedures

COMPETENCIES TO DEVELOP

- Follow appropriate procedures in emergency situations.
- Complete accident reports and records.

OBJECTIVES TO ACHIEVE

- Describe appropriate procedures to follow in case of fire.
- Describe procedures for selecting and using a fire extinguisher.
- Classify fires according to type.
- Summarize procedures to follow for various weather related emergencies.
- Outline procedures to follow in medical emergencies.
- Name reports and records to complete following an accident.

The food service establishment's safety instruction should include what to do in case of emergencies. Food service employees should know what to do in case of fire, severe weather, or a medical emergency. Emergency drills should be used to provide practice in reacting calmly to emergencies according to a set plan.

Fire

Serious fires occur so often in food service kitchens that every employee should understand fire safety and know what to do in case of a fire. Injuries often occur because people panic or become confused. If a fire occurs, follow the emergency fire procedures established by the business. Report to the fire department the exact location and type of fire. Alert other employees and assist customers or patients and visitors to safety.

REPORTING A FIRE

Never try to put out a fire alone. Always get help. First, notify the designated person in your area. Then, if necessary, call the fire department. Alert other employees and customers or patients.

Getting help serves two purposes: (1) it brings more people to help extinguish the fire, and (2) it warns other employees near the fire. Never delay calling the fire department even for a few minutes. Minutes can mean the difference between a small fire and a total loss, between a minor inconvenience and death.

Fires may be reported by turning on the alarm in a fire alarm box or by telephone. Red fire alarm boxes may be located inside or outside buildings. After turning on the alarm, wait nearby until fire fighters arrive for directions. If the community uses fire alarm boxes, know the location of the nearest one.

The fire department's telephone number should be clearly posted beside each telephone. It is usually given inside the cover of the telephone book. If you can't find the number, dial the local operator who will either connect you with the fire department or take the information and report the fire for you. When you report a fire, be sure to give the following information:

- your name
- the name of the business
- the address of the business
- the type of fire
- the location of the fire in the building
- the size of the fire.

Fire also should be reported to persons nearby, to the person in charge of the food service shift, and to the director of the building's fire brigade (if there is one). The designated persons then should take charge of evacuating the building, if necessary.

MOVING TO SAFETY

All employees should be familiar with the evacuation plan in case of fire. They should know also their roles in carrying out the plan. Food service businesses need a plan for evacuating customers and employees. Health care facilities need plans for evacuating patients, visitors, and personnel. Schools need plans for evacuating children, teachers, and other employees.

Food service employees should always keep fire doors, fire escapes, and fire exits free from equipment and debris. Know procedures for turning on the sprinkler system if time allows, and the system is not automatic.

In evacuating the building, do not take chances by trying to save personal belongings. The first priority during a fire is saving yourself, and unless another life is involved, no chances should be taken.

AUTOMATIC FIRE EXTINGUISHING SYSTEMS

Most food service establishments are equipped with automatic fire extinguishing systems to prevent major fire disasters. A general system used in dining, storage, and service areas has water sprinklers installed in the ceiling that come on automatically when a predetermined temperature is reached at the point of a sprinkler. Automatic kitchen systems are equipped with dry chemicals to extinguish grease fires. Special systems may be installed over ranges and grills. Unlike the other automatic systems, range and hood systems can be activated manually if they fail to come on automatically.

Automatic fire extinguishing systems are checked regularly by the local fire marshall. In general, food service employees have no responsibilities for turning these systems on or off or for maintaining them. In fact, with the exception of the manual option on the range and hood systems, employees should not tamper with these systems in any way. However, food service employees can take other steps to keep fires from spreading.

RESPONDING TO A FIRE

A fire must have three things to burn: Oxygen + Fuel + Heat = Fire. Almost any material can become fuel for a fire--food, rags, flammable liquids like grease or cleaning fluids, wood, furniture, and plastics.

If the fire is small, such as in an ashtray or a pan, you may be able to put it out without danger. To put out a fire, you must remove one of its essential ingredients. Some techniques for doing this include:

Keep the fire from getting oxygen.

1. If the fire is in a pan, put the lid on or douse with baking soda. The fire will quickly consume its remaining oxygen and die.
2. Smother the fire with a fire blanket.
3. Use a fire extinguisher.
4. Drown the fire with water. Use water on paper, wood, excelsior, cloth, and ash tray fires. **Do not** use water on grease, cooking oil, or electrical fires.

Remove the fuel.

1. Turn off the breakerswitch to stop fueling an electrical fire.
2. Turn off the gas.
3. Remove nearby flammable materials.

Remove the heat.

1. Cool the fire with water.
2. Turn off the burner or heating element under the container of grease or cooking oil.

When you choose to extinguish or contain the fire, be careful. Keep an escape route open so you can get out if the fire gets bigger. Do not reach over the fire to get baking soda or the fire extinguisher. You could get burned or catch your clothing on fire.

USING A FIRE EXTINGUISHER

A fire extinguisher is a storage container for an extinguishing agent such as water or chemicals. It is designed to put out a small fire, not a large one. The higher the number rating on the extinguisher, the more fire it puts out. Numbers range from 1 to 240. High rated extinguishers are often (not always) the heavier models.

Food service employees should know where fire extinguishers are located, for what type fire each extinguisher is suitable, and how to use each type before a fire occurs. Without having this information, however, a general rule is to use the fire extinguisher closest to the fire and follow the directions on the extinguisher. If properly located, the fire extinguisher closest to the fire is the most suitable for putting out the type of fire expected to occur in that area. For example, extinguishers suitable for putting out grease fires would be located in the kitchen near the range or grill; extinguishers suitable for putting out rubbish fires would be located where trash is collected.

To use a fire extinguisher, think of the word **PASS** and follow these general directions:

1. PULL the pin. Some units require the releasing of a lock latch, pressing a puncture lever, or other motion.
2. AIM the extinguisher nozzle (horn or hose) at the *base* of the fire.
3. SQUEEZE or press the handle.
4. SWEEP from side to side at the base of the fire until it goes out. Shut off the extinguisher. Watch for reflash and reactivate the extinguisher, if necessary.

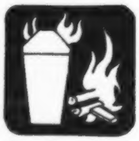
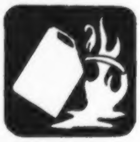
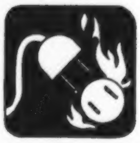
Chemical and water extinguishers require slightly different action. Read the instructions on an extinguisher before you use it.

The three types of fire likely to occur in food service establishments are:
Class A - wood, paper, rubbish
Class B - gas, grease, other liquid
Class C - live electrical equipment

Fire extinguishers are labeled for the class of fire for which they are to be used. Traditionally the labels A, B, or C have been used alone to identify fire extinguishers. Recently pictograms have come into use. The user may find the A, B, C labels or both the pictograms and the A, B, C labels on an extinguisher.

Using one type fire extinguisher on another type fire may make the fire worse. Common errors are using water (A) on a grease or on an electrical fire (B or C). A multipurpose dry chemical extinguisher labeled ABC puts out most types of fires. Kitchens are usually equipped with a combination BC extinguisher.

The chart below shows the label and pictograms for each type fire extinguisher.

LABEL	PICTOGRAM	TYPE OF FIRE
A		***Ordinary Combustibles*** Fires in paper, cloth, wood, rubber, and many plastics require a water type extinguisher labeled A.
B		***Flammable Liquids*** Fires in oils, gasoline, some paints, lacquers, grease in a frying pan or in the oven, solvents and other flammable liquids require an extinguisher labeled B.
C		***Electrical Equipment*** Fires in wiring, fuse boxes, energized electrical equipment and other electrical sources require an extinguisher labeled C.

Weather or Disaster Emergencies

Food service businesses should plan for weather-related emergencies as part of their overall safety program. Food service managers should identify the hazards most likely to occur in their area and make plans for dealing with each. Weather-related hazards most likely to affect food service businesses include thunderstorms, lightning, tornados, hurricanes, and blizzards.

WEATHER ALERTS

For any type of severe weather, it is important to stay aware of what is happening. The most common sources of information are news and weather reports on local radio and television stations. A National Weather Service weather radio can be purchased to provide 24-hour weather reports and weather watches and warnings. An attention alert signal is used in some areas to alert the public to fire or storms. An ***attention alert signal*** is a three- to five-second, steady, high-pitched tone. It means that action is required. Food service workers should learn the uses of such signals locally. Knowing the signal's local meaning will help you know how to respond. In many locales, the signal means that you should tune to a local TV or radio station broadcast for information.

TORNADOES

Tornadoes are threats in many parts of the country. Even when conditions are favorable for tornadoes to develop, however, many people's activities do not cease. They continue to work, shop, eat, and go about their daily lives. Because a tornado may strike suddenly, food service employees should learn emergency procedures for responding to a tornado.

The National Weather Service issues two types of reports on tornadoes. A ***tornado watch*** means conditions are such that tornadoes could develop. A ***tornado warning*** means a tornado has been sighted–visually or by weather radar. Persons close to the storm should **take cover immediately.**

Tornado watches and warnings are announced to the public by radio and TV, with some TV stations placing a symbol in the corner of the screen. The designated person, usually the food service manager, should monitor radio or TV stations during a tornado watch to obtain continuous weather advisories. This person should direct employees and customers to take cover if the signal is given.

Each food service employee should know the safest place for shelter in the food service establishment. When you hear a tornado warning, go immediately to the designated place. Safe places include tornado shelters and/or cellars, underground excavations, and substantial steel-framed or reinforced concrete buildings. Avoid structures with wide, free-span roofs. Stay away from windows. Stand in an interior hallway on a lower floor, preferably in the basement. Keep radios and television sets on, but do not telephone the weather bureau or other information centers.

POWER FAILURES

One common problem caused by both fire and severe weather is power failure. Power failure may occur as a result of other causes as well. The food service establishment should have a plan for evacuating customers and employees in the event of power failure. Panic due to the sudden darkness is the greatest hazard. The chance of panic can be reduced with several precautions:

- Exits should be well-marked and kept clear.
- Candles used on tables for atmosphere can provide light in case of power failure.
- Calm employees who are familiar with evacuation plans should direct customers calmly and safely out of the building.

Medical Emergencies

When employees or customers have accidents, they should receive immediate care. First, the accident must be reported to the supervisor, who will probably send the person to the first aid station, or if the accident is serious, the supervisor will send the person to a doctor or call an ambulance. Small cuts, burns, or bruises should be cared for immediately.

Employees should do their part to guard against accidents, but in case an accident occurs, they should seek aid for *any* type of injury suffered. No injury is too small to report. Employers must fill out accident reports for any injury.

The responsibility for administering first aid may be designated to one trained person on each shift. However, all food service employees need an understanding of basic first aid procedures. The sections below give first aid procedures to follow in various medical emergencies.

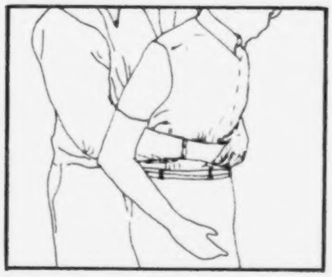
CHOKING

Occasionally, a person will choke on a food or beverage. Choking occurs when a foreign object lodges in a person's throat and cuts off breathing. When choking occurs, the person cannot speak and may not be able to move either. The choking victim may be unable to alert anyone to what is happening. Without help the person will die in only a few minutes.

Food service employees should stay alert for signs that a customer may be choking. Should you believe a customer is choking, act quickly. Go to the person immediately. To be certain whether the person is choking rather than having a heart attack, ask the person a question like, "Do you need some help?" The person who is choking will *not* be able to answer aloud. The heart attack victim will be able to answer aloud. In addition, the choking victim is unable to cough or breathe, may turn blue in the face, or may use a "distress signal" (such as clutching at the throat).

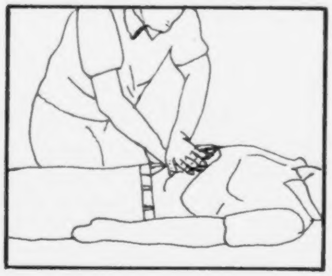
If you are certain the person is choking, act at once to dislodge the foreign body. First, deliver four sharp blows in rapid succession with the heel of your hand between the victim's shoulder blades. Next, direct a series of manual thrusts to the victim's upper abdomen or chest to force air from the lungs. (NOTE: These procedures may vary for children. Check a first aid manual for adaptations for children.)

The ***abdominal thrust*** procedure varies with the victim's position:



- When the victim is standing or sitting:

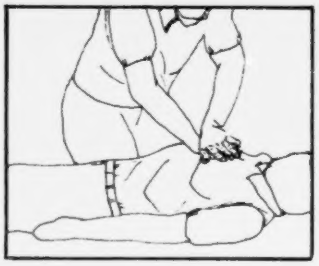
  Stand behind the victim and wrap your arms around the victim's waist. Place the thumb side of your fist against the victim's abdomen, palm down, and exert a *quick* upward thrust.



- When the victim is lying down:

  Place the victim on his or her back and kneel beside or astride the victim. Place the heel of one of your hands in the middle of the victim's abdomen, slightly above the navel and below the rib cage, and place your other hand on top of it.

  Rock forward so that your shoulders are directly over the victim's abdomen and press toward the diaphragm with a quick upward thrust.



Do not press to either side. Repeat the thrust four times, if necessary.

The ***chest thrust*** is done as an alternate to the abdominal thrust. It is used if the victim is excessively fat or is in the last few months of pregnancy. In the chest thrust, apply pressure from 1 to 1½ inches or about the width of three fingers above the lower tip of the breastbone (sternum). *Never push directly on the lower end of the breastbone.*

BURNS

There are three types of burns: first-degree, second-degree, and third-degree. The chart below describes each type and what treatment should be administered.

Type	Description	Treatment
First-degree (1°)	Skin reddened but unbroken	Place under cold water.
Second-degree (2°)	Skin reddened, blisters formed	Place under cold water. Cover with dry, sterile dressing.
Third-degree (3°)	Skin partly destroyed; charring present	Cover entire area with a dry, sterile dressing.

Avoid removing clothing that is stuck to burned areas. Medicine or ointment should not be applied to burns except when ordered by a doctor. Blisters should not be broken.

CUTS AND BRUISES

For minor cuts, cleanse the wound with water. Leave uncovered unless a dressing is needed to protect the wound and keep out infection. Consult a health care professional regarding further treatment such as stitches or care of any puncture wound. A tetanus shot may be needed following any puncture wound.

For severe cuts, it is urgent to stop severe bleeding immediately. Shock and loss of consciousness may result from rapid loss of blood. Cover the wound with a clean dressing such as a thick pad of gauze or a folded clean cloth, then apply direct pressure using your hand. Never use a tourniquet except in cases of massive hemorrhaging (as with a severed limb) that cannot be controlled by any other means. Seek professional medical care as soon as possible.

Most bruises are relatively small injuries. When a small bruise occurs, put cold applications (wrapped or covered) on the injured area to prevent additional swelling of tissue and to slow down internal bleeding.

Reporting Accidents

Management must keep accident records of all injuries. Written records of accidents should include the kind of injuries that have occurred and to whom, the day and the hour they occurred, and where they occurred. The accident record is necessary for OHSA and insurance purposes. It protects both the employer and the injured person. Accidents, regardless how minor, must be recorded. Even a minor injury can result in permanent damage, expecially if ignored. The employer must immediately report to OSHA each injury or health hazard that results in a fatality or hospitalization of five or more employees. An annual summary of all work-related injuries and illness must be submitted to OSHA each February.

Points To Remember

- Food service employees should know what to do in case of fire, severe weather, or medical emergency.
- If a fire occurs, always get help. First notify the designated person in your work area. If the fire is small, put it out by removing oxygen, fuel, or heat. Be sure to use the right procedures or fire extinguisher for the type fire. If necessary, call the fire department. Alert other employees and customers or patients. It may be necessary to evacuate the building.
- The three types of fire likely to occur in food service establishments are: Class A—wood, paper, rubbish; Class B—gas, grease, and other liquid; and Class C—live electrical equipment.
- The weather-related hazards most likely to affect food service businesses include thunderstorms, lightning, tornadoes, hurricanes, and blizzards.
- For any type of severe weather, it is important to stay informed of current conditions by listening to news and weather reports on local radio and television stations or a National Weather Service weather radio. Know the local attention alert signal and tornado watch and warning signals.
- Panic can be avoided during severe weather by knowing emergency exits, evacuation plans, designated shelters, and emergency procedures.
- When food service employees or customers have accidents, they should receive immediate care. All accidents should be reported to the supervisor.
- A choking victim is unable to talk, cough, or breathe, may turn blue in the face, or may use a distress signal (such as clutching the throat). To aid the choking victim, deliver four sharp blows between the shoulder blades. Next, direct a series of manual thrusts to the victim's upper abdomen or chest, that force air from the lungs.

- The appropriate treatment of burns depends on the severity of the burn. For minor burns, place under cold water.
- Minor cuts should be cleansed with water and may be left uncovered. Puncture wounds require a physician's care. For severe cuts, stop bleeding immediately by applying a clean dressing and using the hand to place direct pressure on the wound.
- Minor bruises can be treated with cold applications to prevent additional swelling of tissue and to slow down internal bleeding.
- Written records of accidents should include the kind of injuries that have occurred and to whom, the day and the hour they occurred, and where they occurred. Records are necessary for OSHA and insurance purposes.

Words To Know

abdominal thrust
attention alert signal
chest thrust
Class A fire
Class B fire
Class C fire
electrical equipment
first-degree burn
flammable liquids
ordinary combustibles
second-degree burn
third-degree burn
tornado warning
tornado watch

Questions For Review

1. What are two important reasons for getting help whenever a fire occurs?
2. What information should you provide to the fire department when reporting a fire?
3. What are three keys to successfully put out a fire?
4. What three things do you need to know about the fire extinguishers in the food service establishment before a fire occurs?
5. Name and describe the three classes of fire most likely to occur in a food service establishment.
6. What is the difference between a tornado watch and a tornado warning?
7. Give three examples of safe places to take shelter during a tornado.
8. Describe three ways panic can be avoided in case of power failure.
9. How can you be sure a person is the victim of choking, rather than a heart attack?

10. What two means are used to dislodge the foreign body which is causing a person to choke?

11. Describe the appearance and treatment of the three degrees of burns:
    a. first-degree
    b. second-degree
    c. third-degree

12. What is the primary concern in treating a severe cut?

13. What treatment should be used for small bruises?

14. What accident and injury records must be recorded and to whom must they be reported?

5

Chapter Five
Personnel, Equipment, and Facility Sanitation

COMPETENCIES TO DEVELOP

- Follow federal, state, and local sanitation codes for food service establishments.
- Maintain acceptable standards in personal grooming and hygiene.
- Perform sanitation duties according to the cleaning schedule provided.
- Use sanitary procedures when washing, sanitizing, and drying pots, pans, and other utensils by hand.
- Use sanitary procedures when washing glassware, tableware, and flatware in the dishwashing machine.
- Inspect, sort, and store clean glassware, tableware, flatware, and utensils.
- Report signs of pests in the food service establishment.

OBJECTIVES TO ACHIEVE

- Summarize federal, state, and local sanitation codes for food service establishments.
- Demonstrate personal sanitation acceptable for food service employees.
- Explain procedures for washing, sanitizing, and drying pots, pans, and other utensils by hand.
- Outline procedures for washing glassware, tableware, and flatware in the dishwashing machine.
- Describe procedures for inspecting, sorting, and storing clean glassware, tableware, flatware, and utensils.
- Describe sanitation requirements for food service equipment.
- Cite procedures for pest control in the food service establishment.

Sanitation involves the creation and maintenance of conditions favorable to good health. To avoid health hazards in food service establishments, personnel, equipment, and facilities must be both clean and sanitary. ***Clean*** means absence of visible soil. ***Sanitary*** means free of harmful microorganisms and other harmful substances. In health care facilities, the term ***aseptic*** (a SEP tik), meaning free from disease-producing microorganisms, is used to refer to the extremely clean conditions which must be maintained.

The main purpose of maintaining sanitary conditions in food service establishments is to serve food that is free of ***contamination***. Contaminated food contains disease-producing organisms. Standards for sanitation in food service apply to personnel, equipment, facilities, the food supply, and the handling of food. Sanitation standards for food handling are discussed in Chapter 6.

Codes and Standards

Standards for sanitation in food service are established by laws known as ***sanitary codes*** or regulations. These laws make it illegal for a food service establishment to be unsanitary. The main purpose of food sanitation codes is to protect the consumer of food.

FEDERAL REGULATIONS

Most federal laws about food do not directly affect the average food service establishment. Federal standards for food service sanitation are, however, used as models for state and local regulations. In addition, the federal government works to safeguard many food products purchased by food service establishments. The federal agencies which make and/or enforce sanitation standards are the Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), and the U.S. Center for Disease Control.

STATE AND LOCAL REGULATIONS

The laws which affect food service establishments on a day-to-day basis are those enforced by state and local health authorities. These agencies create detailed regulations and conduct inspections to ensure compliance. While state and local ordinances vary, many are patterned on the Model Food Service Sanitation Ordinance recommended by the Federal Food and Drug Administration.

Inspections of the food service facility are the most visible aspect of sanitary codes. Inspections are made by a ***sanitarian***, (san i TAR e un) a professional in the field of sanitation and a representative of the state or local government. Inspections may be made of building plans and specifications before the facility is built. Once the building is completed, an inspection is made before a permit is issued. After the food service facility has opened, inspections may occur anytime from once a month to once a year. In addition to sanitation inspections conducted by government agencies, some food service facilities contract with private companies for unannounced inspections.

Violations discovered by the government sanitarian must be corrected promptly. Failure to do so may make the owner subject to a fine and unfavorable publicity. When extremely serious violations are discovered, the establishment may be closed.

Personal Sanitation

People are the most common source of food contamination. According to one estimate, up to 50 percent of all food handlers are bearers of disease agents which may be transmitted by food. Staphylococci may be found on the hair and skin and in the mouth, throat, and nose. The lower intestinal tract often houses salmonella and perfringens organisms. These are found in otherwise healthy people. Once a person becomes visibly ill, the likelihood of contaminating food increases dramatically. Boils, pimples, carbuncles, inflamed cuts, and infected eyes and ears are common sources of staph bacteria. Colds, sore throats, influenza, and tuberculosis are diseases spread by careless sneezing and coughing. Diarrhea, upset stomachs, and hepatitis are also shared with others by the careless food service worker.

BATHING

Because the skin provides an ideal place for many microorganisms to live and reproduce, personal cleanliness of food service workers is essential. Daily bathing is a must. Bathing reduces the number of bacteria on the skin. It also helps to prevent body odor which is offensive to both patrons and co-workers.

HAND WASHING

The food service worker's hands are the greatest source of contamination in the food service establishment. Careless habits such as picking the nose, rubbing the ear, scratching the scalp, fingering a pimple or open sore, running fingers through the hair, and coughing and sneezing without using a handkerchief all transfer microorganisms to the hands. For this reason frequent hand washing is the food service worker's most important defense against contamination.

Cross-contamination may occur if foods to be eaten raw (such as salad greens) are handled after handling certain foods to be cooked (particularly poultry or meat) and the food handler doesn't wash his or her hands in between. Salmonella is the bacteria that is commonly spread by cross-contamination. ***Cross-contamination*** is the transfer of harmful microorganisms from one food to another by means of human hands, utensils, or equipment.

Handwashing should be both frequent and thorough. Hands should be thoroughly scrubbed:

- Before beginning work.

- Before handling food.
- After visiting the restroom.
- After coughing, sneezing, blowing the nose, or using a handkerchief.
- After touching the face, hair, or infected areas.
- After smoking a cigarette.
- After touching soiled clothing, dish cloths, etc.
- After touching unclean equipment and work surfaces.
- After handling raw food–particularly meat and poultry.
- After clearing away used dishes and utensils.
- After handling money.

To wash hands properly, follow these steps:

1. Stand well away from the sink and turn the water on. Use water as warm as the hands can comfortably stand.

2. Moisten the hands and apply a disinfectant liquid or powder soap. Lather well beyond the wrists as far as needed to remove soil and dirt.

3. Pay careful attention to the areas between the fingers and around the nails. Use a brush for cleaning under the nails.

4. Rub one hand against the other, using friction. Rub for about 20 seconds.

5. Rinse hands thoroughly under running water. Allow the water to flow from above down the fingertips. This rinses contaminants off the hands rather than up the arms. ***Contaminants*** (con TAM i nuts) are disease-carrying substances. Well-planned food service facilities have faucets which turn off automatically or ones with a lever which can be pushed to "off" with the elbow. Otherwise, use a single-service towel to grip the faucet while turning it off.

6. Dry hands thoroughly. Use a sanitary single-service towel or hot air dryer. A ***single-service towel*** may be a paper towel or a cloth towel meant to be used only once.

Do not touch anything that could contaminate your hands before returning to work. Wash your hands often enough to keep your hands clean at all times.

OTHER HYGIENE PRACTICES

Other basic ***hygiene*** or cleanliness practices also help reduce sources of contamination. Clean fingernails, teeth, hair, and clothing are necessary for every food service worker. Keep fingernails short and clean. Do not use fingernail polish. Treat and clip hangnails. Brush teeth twice a day. Shampoo hair frequently. Use a hair net, band, or cap to cover hair. Wear clean undergarments, uniforms, and aprons daily. Do not wear rings when working with food.

HEALTH PRACTICES

Good health practices are another way to reduce the chance of transmitting diseases to others. Have regular physical checkups. Work only when you are free of disease or illness. Smoke only in designated areas. Bandage and cover wounds and open sores with a waterproof protector. In some cases, the worker may need to be moved to another work station, where food is not handled, until the injury heals.

SANITATION PRACTICES

Food service workers must handle food and food contact surfaces safely. Good habits can prevent food contamination or the spread of disease. Good sanitation practices include:

- Do not wash hands in sinks used to prepare food.
- Do not spit on the floor or into sinks.
- Cover mouth during coughs and sneezes. Wash hands immediately after.
- Avoid touching pimples or scratching your head and face.
- Never use wiping cloths to remove perspiration or to dry hands.
- Use clean spoons, never your fingers, each time for tasting food.
- Cover foods properly and store in the refrigerator.
- Use disposable plastic gloves, tongs, or scoops when serving ice cubes, butter, rolls, or pastry.
- Do not touch the parts of dishes and utensils which customers put in their mouths. These ***food contact surfaces*** include the rims of glasses and cups, tines of forks, blades of knives, bowls of spoons, and the top or sides of plates and bowls.
- Throw away uneaten food and unopened individual containers of sugar, salt, and pepper that are returned from the dining area. Never reserve or eat such items.
- Scrape leftover food from plates with a rubber scraper, not hands.
- Never handle clean place settings or food without washing your hands after wiping tables, bussing soiled dishes, or handling money.

Dishwashing

Cleaning and sanitizing glasses, dishes, and flatware are necessary to prevent food-borne diseases. In addition, the cleanliness of these items may affect the reputation of the food service facility. Pots and pans and other utensils used in food preparation and service must also be kept clean and sanitary.

Clean and sanitary refer to different qualities. A plate may appear clean, but may harbor harmful organisms if it was not washed properly. A glass may appear water spotted, but be free of germs if it was rinsed in hot water or treated with a sanitizing solution after being washed. It does not look clean, but it is sanitary. Similarly, a food service employee may appear clean, but, in fact, may be harboring a harmful microorganism that may contaminate food during preparation or service.

Dishwashing may be done by hand or by machine. Either way sanitation is ensured by heat high enough to kill microorganisms or by treatment with a chemical sanitizing compound. The most common method of heat sanitizing is immersion of an object in water at 170°F (about 77°C) for no less than 30 seconds. The most common chemical sanitizers are chlorine, iodine, and quaternary ammonia (quats). Chemical sanitizing may be done in two ways: (1) The object is immersed in the correct concentration of sanitizer for one minute. (2) The surface of the object is rinsed, swabbed, or sprayed with double the usual recommended concentration of sanitizer. For the sanitizing process to work, the object must be thoroughly clean and completely rinsed. Sanitation does not replace the need for good cleaning.

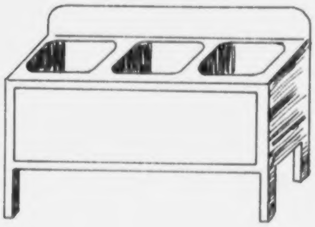
MANUAL DISHWASHING

Manual dishwashing can be as effective as machine dishwashing if it is done carefully. Manual cleaning and sanitation involves six steps:

1. Clean the sinks and work surfaces before beginning.

2. Presoak, scrape, and sort items to be cleaned on a scraping table or other area where garbage can be disposed.

3. Wash in the first sink in a clean detergent solution at a temperature of 120°F (about 49°C). Use a brush or dishmop to loosen and remove any remaining soil.



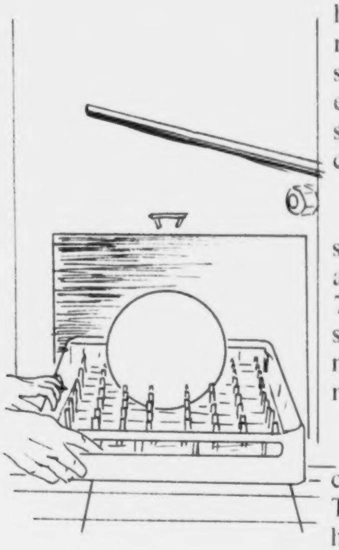
4. Rinse in the second sink in clean water 120 to 140°F (about 49 to 64°C). Be sure all traces of food soil and detergent are removed.

5. Sanitize in the third sink by immersing items in hot water at 170°F for 30 seconds or in a chemical sanitizer solution for 1 minute. A ***sanitizing solution*** for immersion sanitizing may be made of 1oz. (2 tablespoons) of chlorine bleach to 1 gallon of water.

6. Air dry all sanitized items. Do not wipe dry as wiping can recontaminate the items.

MACHINE DISHWASHING

Several types of dishwashing machines are used in food service establishments. ***Stationary dishwashing machines*** complete wash, rinse, and sanitize cycles without moving the rack of items. A ***conveyor dishwashing machine*** moves the dishes along a conveyor through the various cycles. These machines may vary in size, style, and capabilities.



As with manual dishwashing, the first step in machine dishwashing is presoaking, scraping, and sorting items. A prerinse section may be built into the dish machine or dishes may be sprayed by hand to remove heavy soil. Cups and glasses should be placed upside down in dish machine racks. All of one kind of dish should be loaded together in the same rack. Flatware should be put into special racks with the eating ends up. Knives and forks should be mixed with spoons so that the spoons do not nest. Be sure not to crowd flatware or it will not be cleaned properly.

The most important concern in operating the dish machine is to be sure that proper water temperatures, detergent, and rinse agent levels are maintained. Wash temperature should be 140 to 160°F (60 to 71°C). The rinse should be 170 to 190°F (77 to 88°C). Clean items should be allowed to air dry for a short time before storing. The dish machine should be cleaned at least once a day or more frequently if needed. Strainer pans need to be emptied during peak use.

Another important concern in operating the dishwashing machine is cross-contamination if one worker is loading and unloading the machine. The worker can contaminate clean dishes by failing to wash his or her hands after touching dirty dishes.

Clean items must be transported and stored in clean, protected areas. Wheeled dish carts or tables are often used. The cart itself must be kept clean and sanitary. The storage area must be more than six inches off the floor. It should be protected from splashes, dust, and contact with food. Stored items must be accessible without having to touch surfaces which will contact food or beverages or the customer's mouth. These precautions will keep glasses, dishes, flatware, utensils, and equipment from becoming contaminated before use.

Cleaning Stationary Equipment

Proper cleaning of stationary equipment is as important as the proper cleaning and sanitizing of utensils. One contaminated meat slicer, for example, could cause hundreds of people to become ill.

Follow the manufacturer's detailed instructions for disassembling and cleaning stationary equipment. For general cleaning, observe the following guidelines:

- Unplug electric equipment before cleaning.
- Remove removable parts and wash and sanitize by hand.
- Wash remaining food-contact surfaces and rinse by wiping or spraying with a solution of ***chemical sanitizer*** mixed to twice the strength required for immersion sanitizing. Allow to air dry before reassembling.

- Keep cloths used for food-contact surfaces separate from other wiping cloths. Wring out wiping cloths frequently in a sanitizing solution and store them in the solution when not in use. Launder cloths daily or more often if necessary.

Facility Sanitation

Cleanliness is necessary to preserve the appearance of furniture and to sanitize surface areas. Clean, attractive surroundings also help to make a meal enjoyable.

CLEANING TABLETOPS, COUNTERTOPS, AND OTHER SURFACES

The first step in cleaning a table or counter is to remove the dishes, glasses, flatware, and trash. If a cart is used for the removal of these items, use a separate pan for each item to reduce breakage. Place dishes in the pans quickly, but quietly.

To wipe the table or counter use a cloth which is clean, rinsed, and wrung out. After wiping the table or counter, check to be sure that no sticky spots remain and that the surface is dry.

After each meal, clean tabletops and sides or edges and counters with a sanitizing solution. The kind of sanitizing solution used varies from one establishment to another.

Check the ashtrays, salt and pepper shakers, and sugar containers, and wipe these items clean. Use a napkin to wipe the ashtray clean. Ashtrays should be run through the dishwasher periodically. While you are at the table, check the chair seats, wipe them clean with a damp cloth, and dry them with a clean cloth.

Other surfaces to keep clean are windows, shelves, glass counters, pie cases, service equipment, and beverage containers. Dusty or dirty surfaces not only affect the customer's or patient's appetite but provide opportunities for bacteria to grow as well.

CLEANING FLOORS

Floors must be kept clean for two reasons: safety and appearance. Check floors constantly for spilled foods and other debris and clean up spills immediately. Daily or more frequent cleaning of floors is also necessary in all establishments where food is served. The chart below gives suggested procedures for cleaning floors.

Floor Care

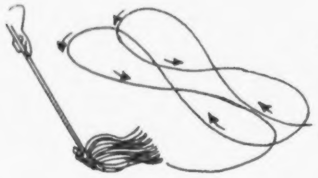
Floor Finishes	Care Required
Concrete–a hard, compact substance made of sand, gravel, cement, and water.	Sweep regularly. Scrub with detergent solution; rinse.

Floor Finishes	Care Required
Terrazzo—small chips of marble set in cement and polished.	Scrub with detergent solution; rinse and mop dry. Abrasive cleaner may be used occasionally to remove heavy soil and stain. Terrazzo sealer may be applied to areas where traffic is heavy.
Ceramic Tile—tiles made from a mixture of clay and water which has been baked at a high temperature. May be either glazed or unglazed.	Sweep with soft brush. Wash with detergent solution; leave suds on long enough to loosen soil; mop; rinse with clean, warm water; mop dry.
Asphalt Tile—tiles made from asphalt-treated asbestos fibers with an inert filler (usually limestone). Ingredients mixed under heat and rolled to uniform thickness with hot rollers.	Sweep with a soft brush. Mop with clean, lukewarm water and mild detergent. Do not use solvent-type cleaners or distillates.
Rubber Tile—various types of rubber are heated and rolled out under pressure, then cut into tiles. Caution—rubber tiles will soften if oil base cleaner or if wax is used.	Sweep with a soft brush. Mop with clean, lukewarm water. If soil is not removed, use a small amount of ammonia or non-fat synthetic cleaner. Mop a small section at a time; rinse; dry; buff thoroughly. The more often the floor is buffed, the less often it will need to be washed.
Vinyl Tile—similar to rubber tile. A type of plastic which is tough, flexible, and shiny.	Sweep with soft brush. Wash with ordinary cleaning solutions. Rinse and mop dry.
Hardwood (waxed)—oak is most commonly used. Beauty is in the grain of the wood.	Sweep with soft brush or mop free from oil since oil tends to dissolve wax and leave a film over the surface of the floor. Remove spots by rubbing the floor with a cloth dampened with liquid wax and polish. Remove exceptionally soiled spots with steel wool and a cleaning solution. Remove wax by rubbing the floor with a cloth dampened with a prepared cleaner. Then wash the floor with a mild detergent solution; rinse with clear water; mop dry; rewax, and polish.
Carpet—heavy, woven or felted fabric usually with a nap or pile.	Vacuum daily. Remove spots immediately. Shampoo approximately twice a year. Reset or brush pile after shampooing.

MOPPING PROCEDURES

Clean or mop floors in the most efficient way. Below are some general guides for floor cleaning to save time and energy.

1. Use two buckets—one filled with clean warm water and one filled with water to which a synthetic detergent has been added.



2. Dip the mop into the bucket with detergent, and wring out until partially dry.

3. Start about two feet from the baseboard and then make a long stroke close to the baseboard. Use a figure-eight motion as you mop

to gain maximum contact of the mop head with the floor. To remove any stubborn spots, use the heel of the mop.

4. Mop an area about 9 X 12 feet, keeping the mop bucket behind you; rinse and dry the floor; rinse again with a damp mop and allow to dry.
5. Change cleaning solution and rinse water often.
6. When the job is completed, rinse the mop heads and the bucket. Wring the mop heads and hang to dry or put in laundry pick-up area. Store other equipment and supplies in specified areas.

STRIPPING AND BUFFING

Hard surface floors should be stripped as needed to remove embedded dirt and to prepare the floor for refinishing. Stripping is performed by a combination of chemical action of the cleaning agent and the action of the brush or pad attached to an ***electric floor machine***.

Floors with a ***buffable finish*** may be spray buffed to perserve the floor finish and maintain an attractive shiny surface. ***Spray buffing*** is done with a mild cleaning agent used with the electric floor machine equipped with a soft buffing pad. For some machines, an aerosol can of cleaning agent can be attached to the machine for automatic dispensing of the cleaning agent.

Controlling Pests

Any establishment handling food must take measures to eliminate disease-carrying pests. The most common pests in food service establishments are ***insect pests***, ***rodent pests***, and ***bird pests***.

INSECT PESTS

Cockroaches. Cockroaches have flat bodies which enable them to hide in cracks and crevices. Cockroaches are known carriers of salmonella, a bacteria which can cause a disease resulting in severe vomiting, diarrhea, and fever. Cockroaches spread filth and disease. They are sensitive to light and feed on contaminated materials in the dark. Roaches spread germs to anything they touch or to anything that touches any of their discharges. Some signs that cockroaches are present include stains from their droppings, a musty odor, or empty egg cases from which roaches have hatched. You may also see the bugs scurry away when you turn on the lights in a darkened storeroom or food preparation area.

Flies. Flies have an amazing sense of smell, and they are attracted to any type of food or waste odors. A fly spreads germs in three ways: from its body wastes, from its feet and hairy legs, and in its manner of feeding. When eating solid food, the fly spits up a stomach fluid to dissolve the food; this fluid is packed with germs. Flies can transmit a variety of human diseases including typhoid, dysentery, infantile diarrhea, and streptococcal and staphylococcal infections.

Ants. Ants eat a variety of food, particularly sweets and fats such as syrup and fried foods, and can easily contaminate anything they touch. Ants spread germs by carrying filth and food waste on their legs and bodies.

Pantry Pests. Pantry pests feed on items normally stored in the pantry. These pests include bran beetles, weevils, hide and larder beetles, cereal mites, flour and meal moths, silverfish, and firebrats. Some signs of these pests are the insects themselves, their webbing, clumped food particles, holes in food, or holes in packaging.

RODENT PESTS

Rats and mice cause much suffering each year in illness, death, and destruction of property. Both pests can gnaw through wood and squeeze through surprisingly small openings. A one-half inch crack will admit a young rat or an adult mouse. Both dislike open spaces, and they move along walls, leaving a dark, greasy trail. They prefer to take small bits of food into hiding, but they will eat larger items wherever these are found. The presence of droppings, or feces, is one of the signs of rodent infestations. Tracks may be seen on dusty surfaces. Rats and mice transmit disease by the fleas they carry on their bodies and by their urine and feces. Rodents may be involved in the transmission of such diseases as salmonellosis, leptospirosis, and murine typhus.

BIRD PESTS

Three birds can be pests to the food service operator. These birds are the city pigeon, the English sparrow, and the European starling.

These birds are very much like rats and mice. They depend on what humans discard for food and on human buildings for shelter. The federal law does not protect these birds since they are a problem in sanitation.

Birds are pests to the food service industry in several ways. They build their nests in attics and roofs and this creates fire hazards. Their droppings are unsanitary because of their smell and possible contamination of food. Birds carry several human diseases such as psittacosis (usually occurs as pneumonia accompanied by a high fever) and encephalitis (an inflammation of the brain).

Almost all birds carry mites, lice, or ticks. Mites, which are most common, hide in the nest during the day and feed on the birds at night.

DESTROYING AND REPELLING PESTS

The best insurance against pests is to store food properly and to promptly clean up any spilled food. To remain free of pests, the food service establishment must take pest control measures on a regular basis. These measures include: (1) keeping all windows and doors shut, (2) maintaining proper sanitation and housekeeping inside and outside of the establishment, (3) eliminating the presence of rodents, and (4) cleaning garbage cans and keeping them covered.

Occasionally, these measures are not enough to completely control or eliminate all types of pests. Professional pest control experts should handle the exterminating or repelling of any type of pest. Federally regulated chemicals must be used by a licensed person. If you see any signs of pests in the food service establishment, report them to your supervisor immediately. Losses due to customer annoyance, unfavorable publicity, and damage from insects and rodents total several billion dollars each year.

PESTICIDES AND SAFETY

Pesticides (PES ta sides) are harmful to humans as well as to insects. For this reason, precautions should be followed when storing, using, and disposing of pesticides. Some precautions that should be followed are:

- Be sure containers are labeled properly.
- Follow directions on the label.
- Do not use around food or people.
- Store in a safe place.
- Rinse and destroy bottles and cans when empty.

Points To Remember

- Sanitation involves the creation and maintenance of conditions favorable to good health. Clean means absence of visible soil, while sanitary means free of harmful microorganisms or bacteria.
- Sanitary codes are laws or regulations which protect the public's health by setting standards of cleanliness and sanitation. The laws which affect food service establishments are enforced by state and local health authorities. Enforcement is done through inspections made by a sanitarian.
- People are the most common source of food contamination. The skin, hands, fingernails, teeth, hair, and clothing are all possible sources of contamination. Personal cleanliness and frequent handwashing are musts for food service workers. Sanitary personal habits can prevent food contamination and the spread of disease.
- Sanitation in dishwashing by hand or machine is ensured by heat high enough to kill microorganisms or by treatment with a chemical sanitizing compound.
- Equipment must be cleaned and sanitized regularly, especially the food contact surfaces.

- Keeping surfaces clean and sanitary creates a pleasant atmosphere and protects the health of customers or patients. Tabletops, counters, and chair seats should be cleaned and sanitized between uses and at the end of each serving period. Windows, shelves, glass counters, pie cases, service equipment, beverage containers, and floors also require regular cleaning.

- The most common pests in food service establishments are cockroaches, flies, ants, and rodents such as rats and mice. They all carry diseases. The best insurance against pests is to store food properly and to promptly clean up any spilled food. Regular pest control measures are also important. Signs of pests in the food service establishment should be reported immediately.

Words To Know

aseptic
bird pests
buffable finish
chemical sanitizer
clean
contaminants
contamination
conveyor dishwashing machine
cross-contamination
electric floor machine
food contact surfaces
hygiene
insect pests
pesticides
rodent pests
sanitarian
sanitary
sanitary codes
sanitation
sanitizing solution
single-service towel
spray buffing
stationary dishwashing machine

Questions For Review

1. What is the difference between clean and sanitary?
2. What is the main purpose of sanitary codes?
3. What personal hygiene practices should be observed by food service workers?
4. When should food service workers wash their hands?
5. List the six steps for proper hand washing.
6. List five habits food service workers can observe to prevent food contamination and the spread of disease.
7. What are two methods used to sanitize objects during washing?
8. List the six steps for manual dishwashing and sanitation.
9. Describe the procedures for machine dishwashing.
10. Describe general guidelines for cleaning of equipment.
11. What surfaces in the food service facility should be cleaned and sanitized regularly?

12. Describe procedures for cleaning and sanitizing a table or counter.

13. Describe the care required by specific floor finishes.

14. What are the most common pests in food service establishments?

15. Why are pests in the food service establishment unsanitary?

16. How can pests be avoided in the food service establishment?

17. What precautions should be followed when storing, using, and disposing of pesticides?

6

Chapter Six
Food Sanitation

COMPETENCY TO DEVELOP

- Use sanitary food handling, preparation, and storage techniques.

OBJECTIVES TO ACHIEVE

- Explain biological, chemical, and physical hazards to food.
- Describe food-borne illnesses, their causes, and means of transmission.
- Summarize sanitary procedures for food handling and storage.
- Explain the time-and-temperature principle.
- Describe correct procedure for handling leftover foods.

Food becomes hazardous to health if it is infected with harmful microorganisms, chemicals, or physical hazards. These hazards can be avoided by sanitary food handling.

To reduce the effects of contamination, the growth of microorganisms must be slowed or stopped by refrigeration or the microorganisms must be destroyed by sufficient heat. At temperatures between 45° and 140°F (7.2-60°C), microorganisms grow and multiply greatly in a very short time. To prevent microorganisms from growing and multiplying, food must be kept out of this danger zone.

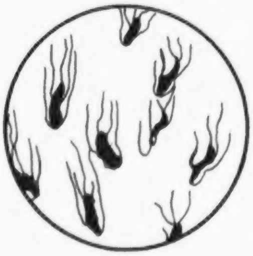
Food-Borne Illnesses

At least one million persons in the United States suffer from food-borne illnesses each year. A ***food-borne illness*** is simply a disease that is carried, or transmitted, to people by food. More cases of food-borne illness result from food eaten in food service establishments than from any other identified source. Other sources of food-borne illnesses include homes and food processing establishments. The source of more than 40 percent of all cases is unknown.

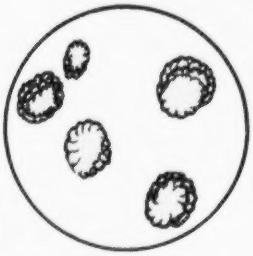
The three hazards responsible for outbreaks of food-borne illness are biological hazards, chemical hazards, and physical hazards. Biological hazards account for the most cases of food-borne illness. Illnesses from chemical and physical hazards occur less frequently but are no less dangerous.

BIOLOGICAL HAZARDS

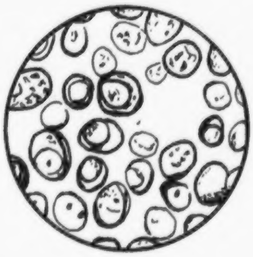
Biological hazards result from harmful microorganisms. ***Microorganisms*** are tiny living cells that can be seen only with a microscope. Microorganisms are everywhere--in our bodies, in the soil, in water, and in the air. The four types of microorganisms which affect food are bacteria, viruses, yeasts, and molds. A microscopic view of an example of each type of microorganism is shown below.



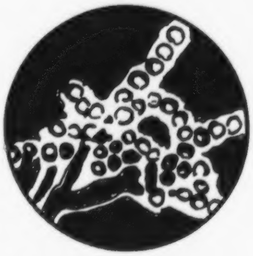
Salmonella typhi (Bacteria)



virus



yeast cells



Penicillium (mold)

Food-borne illnesses caused by biological hazards are classified as either infections or intoxications. A ***food-borne infection*** is a disease caused by eating food which contains harmful microorganisms. A ***food-borne intoxication*** is an illness caused by poisons or ***toxins*** in the food a person eats. The toxin may occur naturally in the food, as in certain mushrooms, or the food may be contaminated by toxic wastes produced by certain microorganisms.

Bacteria are small, single-celled organisms that can live anywhere people can. They thrive in a warm, moist environment that is neutral or slightly acid. Bacteria are more commonly involved in cases of food-borne illness than are viruses, yeasts, and molds. Common names of some food-borne illnesses of bacterial origin are ***staph*** (STAFF), ***botulism*** (BOT u liz um), ***perfingens*** (per FRIN gens) ***poisoning***, and ***salmonellosis*** (sal mone el LO sis). The table on the next page lists information about these diseases.

Viruses are the smallest and perhaps the simplest form of life known. They cause illnesses such as colds, influenza, and infectious hepatitis. Unlike bacteria, viruses cannot grow and multiply on their own but must depend on a living host to reproduce. For this reason, viruses do not increase in number while they are in food. The food merely transports the viruses, which may then lodge themselves in the human host and produce abundantly.

Viruses seem to vary in their reaction to heat and cold. The influenza virus is very sensitive to heat. Another type of virus has been shown to survive in food at temperatures as high as 176°F (80°C) and remain active after storage in a refrigerator for over a year.

MAJOR FOOD-BORNE ILLNESSES OF BACTERIAL ORIGIN

Common Name	STAPH	BOTULISM	PERFRINGENS POISIONING	SALMONELLOSIS
Bacteria	***Staphylococcus aureus***	***Clostridium botulinum***	***Clostridium perfringens***	***Salmonella***
Disease Classification	Intoxication	Intoxication	Infection/ Intoxication	Infection
Incubation Period	1 to 6 hours	12 to 36 hours	8 to 22 hours	6 to 48 hours
Symptoms	Abdominal pain, nausea, vomiting, diarrhea	Fatigue, headache, dizziness, visual disturbances, inability to swallow, paralysis	Abdominal pain, diarrhea	Abdominal pain, headache, nausea, vomiting, fever, diarrhea
Host	Human beings: skin, mucous membranes of nose, throat; infected sores; also animals	Soil, water, some animals and fishes	Intestinal tract of human beings and animals; also soil	Domestic and wild animals; also human beings—especially carriers
Foods Implicated	Improperly prepared custards, cream-filled pastries, dairy products, potato and other salads, Hollandaise sauce, warmed-over foods, meat, poultry, and many other protein foods	Improperly processed canned food such as green beans, corn, beets, chili, spinach, figs, tuna	Meat which has been boiled, steamed, braised, stewed or insufficiently roasted and allowed to cool slowly and served the next day, either cold or reheated	Meat, meat products, meat and poultry salads, egg custards and other protein foods
Prevention	Cleanliness, sanitary habits, proper heating and refrigeration, exclusion of infected food handlers	Pressure-cook food at high temperatures in canning. Boil and stir home-canned food for 20 minutes. Discard food in suspect cans; never use home-canned foods in a commercial food service.	Careful time-temperature control; quick-chill cooked meat dishes to be eaten later. Isolate raw components that may contaminate cooked menu items.	Strict personal hygiene. Avoid fecal contamination from unclean food handlers and unsafe operating practices. Eliminate flies and rodents. Avoid cross-contamination.

Source: *Applied Foodservice Sanitation*, 2nd ed. n.p.: D.C. Heath and Company, 1978, p. 39.

Yeasts are fungi that require sugar and moisture for survival. Yeasts often consume these ingredients in food products and spoil the food in the process. Yeast organisms can be killed by heating to 136°F (56°C) for about 15 minutes. In general, yeast spoilage can often be recognized by the presence of bubbles and an alcoholic smell or taste. Yeast spoilage can create a slime on pickle brine or fruit juices or a pink discoloration in cottage cheese. However, no evidence suggests that yeast-producing diseases in humans are transmitted by food or that yeasts occurring naturally in foods are harmful to human beings.

Like yeasts, molds are a fungi that may or may not be harmful to humans. ***Molds*** are a furry-looking fungi that can grow on almost any food at almost any storage temperature, under almost any conditions—moist or dry, acid or nonacid, salty or sweet. Most molds can be killed by heating them to 140°F (60°C) for 10 minutes. Freezing prevents the growth of molds but will not kill those already present in food. Some molds impart a musty odor and flavor to foods. Food molds are not known to be dangerous to humans, but certain molds produce toxins which have been known to cause cancer in animals. Some people have developed allergies to certain molds. These allergies affect the sinuses, eyes, ears, and respiratory tract.

CHEMICAL HAZARDS

Chemical contamination of food can occur anywhere in the food supply chain—including contamination by pesticides used in agriculture. Three types of ***chemical hazards*** are under the control of the food service manager within the food service establishment: (1) accidental contamination of food with pesticides and other chemicals, (2) use of excessive quantities of additives, and (3) contamination of food with toxic metals.

PESTICIDES AND OTHER CHEMICALS

A first step the food service manager can take to help prevent pesticide contamination in the food supply is to purchase food only from reputable, legally approved sources. A second step is to wash *all* fresh fruits and vegetables, no matter what the source.

The food service manager can and must prevent contamination of food by chemicals within the food service establishment. Germicides and pesticides should be labeled properly, kept in their original containers, and stored separately from food and food-contact materials. Pesticides have caused poisoning when they were accidentally mixed into flour, sprayed onto cooked cereal, and mistaken for baking soda.

Many other chemicals commonly found in food service establishments are poisonous to humans. Detergents, polishes, cleaning agents, and other products of this type should never come into contact with food and should be stored under safe conditions away from the food supply. Label directions on chemical products should be carefully followed. Food poisonings have occurred when drain cleaner, paint remover, and silver polish accidently contaminated food.

ADDITIVES

Food additives, such as food dyes and perservatives, are a subject of debate among scientists and legislators. The effects of long-term use of many food additives are not yet known, but certain food perservatives and other additives used in excessive amounts have caused illness.

For example, nitrates used as coloring agents in meat are ***toxic***, or poisonous, in large concentrations. Use of too much ***monosodium glutamate***, a common food perservative, has also been known to cause illness.

The food service manager is responsible for requisitioning foods without additives or those with comparatively low additive levels. The food service manager should also make sure that additives are never used to cover up spoilage in foods within the food service facility. If additives are used in food preparation, only approved additives should be used and then only in limited amounts.

POISONOUS METALS

When certain metals come into contact with certain foods, contamination results and illness occurs when the foods are eaten. Poisoning can result when high-acid foods are prepared or stored in copper or brass containers, in galvanized (zinc-coated) containers, or in some containers of gray enamelware. Foods implicated in metal poisonings are sauerkraut, tomatoes, fruit gelatins, lemonade, and fruit punches.

Enamelware coated with lead glaze, tin milk cans used to store fruit juices, and copper water lines accidentally exposed to carbonated beverages in vending machines have also figured in chemical food poisoning incidents. Uncovered meats can become poisoned through contact with refrigerator shelves containing cadmium. To prevent such accidental poisonings, use containers only for the purposes for which they are intended. LEAD OR LEAD-BASED PRODUCTS SHOULD NEVER BE USED IN FOOD SERVICE.

PHYSICAL HAZARDS

Most ***physical hazards*** in food handling and service can be eliminated by careful inspection and maintenance of food-contact surfaces and equipment and by training of personnel in safe operating procedures. Physical contaminants such as chips of glass from broken light fixtures or glassware and metal fragments from kitchenware and tableware are obvious dangers that can be prevented by alert food service employees. Ice should never be scooped with a glass or a glass container since the glass may chip, leaving slivers of glass in the ice.

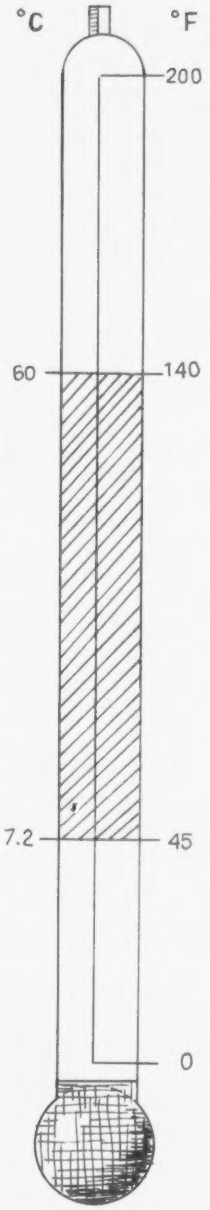
Sanitation in Food Handling

Food must be protected from contamination in every step of preparation and storage, including storage of leftover foods. Several general sanitation guidelines should be followed by food preparation personnel. The most important rule in food sanitation is the time-and-temperature principle.

FOOD PREPARATION GUIDELINES

During food preparation, observe these guidelines:

- Clean raw foods thoroughly.
- Defrost frozen foods according to accepted procedures. The four acceptable methods for thawing frozen food are (1) under refrigeration, (2) under 70°F running water, (3) as part of the conventional cooking process, or (4) in a microwave oven.
- Exercise special care in mixing raw and cooked ingredients, as in salads, sandwich spreads, egg custards, meringues, eggnog, or cream-filled pastries, especially if the product will not be cooked again.
- Cook poultry, stuffed meat, and all stuffing to an internal temperature of 165°F (73.9°C) without any interruption in the cooking process.
- Cook pork, and any food containing pork—such as sausage or bacon—until all parts are heated to at least 150°F (65.6°C).
- Cook rare roast beef and rare beef steak to a final internal temperature of 130°F (54.4°C).
- Use a thermometer to check the temperature of products before the cooking process is ended.
- Avoid licking the fingers during food preparation or putting the tasting spoon back into food after using it for tasting.
- Stir stew-like mixtures frequently so that every particle of the mixture is completely cooked.
- Refrigerate batters, breadings, and similar coatings when not actually in use or else discard. Expose these potentially hazardous items to danger-zone temperatures as little as possible.
- To avoid cross-contamination (discussed in Chapter 5), thoroughly clean and sanitize cutting boards and knives used to cut raw meat and poultry immediately after use. Also wash your hands thoroughly. Salmonella bacteria are frequently present in raw meat and poultry, so do not use the same utensils for these foods and foods to be served raw. Heat will destroy the bacteria in the products to be cooked, but the foods to be served raw may be contaminated if the same utensils were used for both. It is best to maintain separate cutting boards and utensils for raw and cooked products.



TIME-AND-TEMPERATURE PRINCIPLE

The most important rule for protecting food during preparation, storage and service is the ***time-and-temperature principle***. This rule requires that all potentially hazardous food be kept at an internal temperature *below* 45°F (7.2°C) or above 140°F (60°C) during display and service. Stated simply, the time-and-temperature principle means KEEP HOT FOODS HOT, KEEP COLD FOODS COLD.

Hot foods *must* be held at 140°F (60°C) or higher. Thermometers should be used to check the temperature of the food product to be sure that hot-holding equipment is working properly. Containers should be covered to protect against splash and spillage and to retain heat. Proper utensils must be used for portioning and serving. Long-handled ladles, dippers, and similar utensils keep the server's hand away from the food. Serving utensils should be stored properly, not left in the pot where the handle may contaminate the food. Extended holding of hot foods increases the risk of promoting bacterial growth.

LEFTOVERS

Leftover foods must be managed carefully. Foods most frequently associated with food-borne illnesses such as custards, puddings, and creamed casseroles should be discarded. Do not leave coffee cream at room temperature on a table or counter. Many other foods can be kept for 24 hours if proper methods of holding and reheating are used. All cooked, perishable leftovers should be chilled to an internal temperature of 45°F (7.2°C) or less within 2 to 4 hours. Use a thermometer to determine the temperature of the food.

Store leftovers in containers with the greatest surface area possible to ensure rapid cooling. Avoid adding large quantities of food to the refrigeration unit at once. Doing so can raise the temperature of the unit to the point that adequate cooling is not possible. To avoid this problem, precool food in a special low-temperature refrigerator or by some other means. Cover leftovers tightly and label with food name and date. Do not mix leftovers with fresh food.

Points To Remember

- A food-borne illness, or disease that is transmitted to people by food, is most likely to result from harmful microorganisms, or biological hazards. The four types of microorganisms which affect food are bacteria, viruses, yeasts, and molds. Food-borne illnesses caused by biological hazards are classified as either infections or intoxications.
- Bacteria are more commonly involved in cases of food-borne illness than are viruses, yeasts, and molds. Bacteria thrive in a warm, moist environment that is neutral or slightly acid. Common food-borne illnesses of bacterial origin are staphylococcal food intoxication, *clostridium perfringens* food poisoning, salmonellosis food infection, and botulism food intoxication.
- Viruses cause illnesses such as colds, influenza, and infectious hepatitis. Viruses depend on a living host to reproduce. Viruses do not increase in number while they are in food. The food merely transports the viruses to a human host.

- Yeasts and molds are fungi that may or may not be harmful to humans. Yeast spoilage can often be recognized by the presence of bubbles and an alcoholic smell or taste.

- To reduce the effects of contamination, the growth of microorganisms must be slowed or stopped by refrigeration or destroyed by sufficient heat. The danger zone for growth and reproduction of microorganisms is 45° to 140°F (7.2-60°C).

- Chemical hazards in food service include accidental contamination of food with pesticides and other chemicals, use of excessive quantities of additives, and contamination of food with toxic metals.

- Most physical hazards in food service can be eliminated by proper maintenance of equipment and by training of personnel in safe operating procedures.

- The time-and-temperature principle requires that all potentially hazardous food be kept at an internal temperature *below* 45°F (7.2°C) or *above* 140°F (60°C) during display and service. In other words, KEEP HOT FOODS HOT, KEEP COLD FOODS COLD.

- Food must be protected from contamination in every step of preparation and storage. Leftover foods must also be managed carefully.

Words To Know

bacteria
biological hazards
botulism
chemical hazards
food-borne illness
food-borne infection
food-borne intoxication
microorganisms
molds
monosodium glutamate
perfringens poisoning
physical hazards
salmonellosis
staph
time-and-temperature principle
toxic
toxins
viruses
yeasts

Questions For Review

1. What is a food-borne illness?
2. What three types of hazards are responsible for outbreaks of food-borne illness?
3. Which of these hazards accounts for most food-borne illness?
4. What four types of microorganisms affect food?
5. Differentiate between a food-borne infection and a food-borne intoxication.
6. Under what conditions do bacteria thrive best?

[redacted]

7. List three specific steps that a food service establishment can take to control the growth of bacteria in foods.

8. Under what condition do viruses grow and develop?

9. What role does a food contaminated with a virus play in spreading a virus infection?

10. How can yeast spoilage be recognized?

11. Describe the appearance of mold.

12. Name four major food-borne illnesses of bacterial origin. How can each of these illnesses be prevented?

13. What sanitation practices should be observed during food preparation?

14. What is the time-and-temperature principle?

15. What are five guidelines for managing leftover foods?

7

Chapter Seven
Nutrition

COMPETENCIES TO DEVELOP

- Use nutritional information in meeting dietary needs of persons of various ages.
- Use food preparation techniques which conserve nutrients.
- Display awareness of various factors which affect eating habits.

OBJECTIVES TO ACHIEVE

- Describe the functions of food.
- Identify the sources and functions of specific nutrients.
- Describe food preparation techniques which conserve specific nutrients.
- Outline the Daily Food Guide.
- Summarize the Dietary Guidelines for Americans.
- Determine factors which influence eating habits.
- Outline meal patterns common in the United States.

Some food service operations are more concerned with nutrition than others. Health care facilities, schools, and residence facilities are responsible for meeting the nutritional needs of those they feed. Commercial restaurants are usually less concerned with the nutritional needs of customers than are these institutional food service operations. However, some commercial restaurants are now including items which appeal to persons concerned about nutrition, especially to those on a weight-loss diet. Regardless of the menu, all food service establishments should prepare and serve food in a way that retains nutrients.

Functions of Food

Food provides the body with the fuel it needs for creating heat and energy. Just as an engine cannot run without fuel, neither can the body function without food. Besides providing the energy needed to make the body move and making heat to keep it warm, food builds, repairs and maintains the body. For example, food is necessary for repairing and replacing body cells and for manufacturing digestive juices. It also regulates body processes.

People use food to meet physical, social, and emotional needs. These uses of food explain why people sometimes eat even though their bodies do not need the fuel. Emotional stress sometimes causes a person to eat in an effort to overcome unhappiness or nervousness. Food can serve as a substitute for security, acceptance, or love. If food is used frequently as a substitute for other needs, health and vitality suffer.

Understanding the effects of emotions on eating habits is helpful in working with people in a commercial food service establishment, hospital, nursing home, school, or day care center. Many times people may refuse food or complain about it in order to gain attention or because it's one part of their day they feel they can control. The wise food service employee shows patience and understanding in working with such persons.

Food also serves social needs. A food service customer may behave differently, choose different foods, and spend more or less money when dining alone, when dining with family, when dining with business associates, or when dining with friends. For example, a customer on a low-calorie diet may order low-calorie foods when dining alone or with family but order higher calorie foods in the presence of business associates or friends. Food service establishments will generally offer menu items that will meet the social needs of their customers.

Sources and Functions of Nutrients

The body needs ***nutrients*** because they nourish the body. Nutrients are chemical substances found in food. Each nutrient has a specific use in the body, but no nutrient can function independently. The nutrients needed by the body include proteins, carbohydrates, fats, vitamins, and minerals. Like the gasoline which fuels an automobile, the first three produce energy when burned.

The energy value of food is measured in ***calories***. The more calories a food contains, the more energy it produces. Fat produces the most energy or calories when burned–more than twice as much as the same amount of carbohydrates or protein. This explains why some foods are more fattening than others. Minerals and vitamins do not produce energy, but are important for body regulation, maintenance, and growth.

No single food contains all the nutrients needed for life. Eating a wide variety of foods every day is important to ensure that the body gets all of the nutrients it needs to function efficiently.

The body also needs water although water is not a nutrient. The average person needs six to eight glasses of water each day. Water makes up most of our blood, which carries nutrients to the cells of the body. Water aids digestion and absorption of food, regulates body temperature, lubricates moving parts of the body, and aids in the elimination of body wastes.

PROTEIN

Protein is essential to life. Protein is found in every cell of the body. It is necessary for growth, repair, and maintenance of the body. The body needs protein to form muscles, bone, and blood. It is needed for repairing body tissues. It is necessary for making new cells until a person reaches adulthood, then for replacing worn-out or injured cells. Protein makes up the ***antibodies*** that help fight infection. It is contained in some of the ***hormones*** which regulate chemical reactions in the body. Protein makes up the ***enzymes*** which speed up or slow down the chemical reactions in the body. In addition, it helps control the balance of water in the body. Finally, it supplies energy. But if you eat more protein than your body needs, it is broken down and stored as fat.

Amino Acids

Protein is made up of smaller building blocks called ***amino acids***. Scientists have identified more than 20 amino acids. Eight of the amino acids cannot be manufactured by the body. The body must get these ***essential amino acids*** from the diet. The other ***nonessential amino acids*** can be manufactured by the body from the eight essential ones.

Quality of Protein

Some foods contain adequate amounts of all eight essential amino acids. Others do not. To be considered a high-quality or ***complete protein*** a food must contain the essential amino acids in amounts adequate for the growth and repair of body cells. Animal sources, such as meat, eggs, fish, poultry, and milk are excellent sources of complete protein. A low-quality or ***incomplete protein*** food does not have all eight essential amino acids. The proteins found in dried beans and peas, nuts, cereals, and breads are examples of incomplete protein. Foods with incomplete protein may be combined or eaten together to increase the number of essential amino acids provided.

Effects of Cooking

Protein's ease of digestion is affected by cooking. Protein ***coagulates*** or hardens when cooked. Cooking a protein food a long time with dry heat or with high heat hardens the protein. Protein foods should be cooked at a low heat until just done. This makes them easier to digest.

CARBOHYDRATES

Carbohydrate is the body's main source of energy. It helps the body use protein and fat more efficiently. If too little carbohydrate is eaten, the body uses fat and protein for energy. Using fat for energy may result in an acid condition in the blood called ***ketosis***. Using protein for energy is wasteful because protein food is expensive compared to carbohydrates. In addition, using protein for energy may deprive the body of the protein needed for growth, repair, and maintenance. If too much carbohydrate is consumed, it is stored in the body as fat.

Three types of carbohydrate are found in food: sugar, starch, and cellulose. These carbohydrates differ in their chemical structure and are found in different foods.

Sugars

Sugars are simple forms of carbohydrate. Carbohydrates may be either simple sugars, ***monosaccharides***, or double sugars, ***disaccharides***. Both supply the same amount of food energy.

Simple sugars include glucose, fructose, and galactose. ***Glucose*** or ***dextrose*** is the most common type of simple sugar. It occurs naturally in some fruits and vegetables. This is also the type of sugar produced when sugars and starches are broken down by digestion. ***Galactose*** is produced in the body when ***lactose***, the sugar found in milk, is digested. ***Fructose***, or fruit sugar, occurs naturally in fruit. It is the sweetest sugar. It is also made during digestion when sucrose breaks down into fructose and glucose.

Double sugars include sucrose, lactose, and maltose. Table sugar is ***sucrose***. It comes mostly from sugar cane and sugar beets. ***Lactose*** is found only in milk. ***Maltose*** is used in malted cereals and malted milk. Double sugars are broken down into simple sugars during digestion.

Starches

Starch, a ***polysaccharide***, is the most complex form of carbohydrate. It is made up of a combination of many kinds of sugar. Starch is found in bread, cereal, potatoes, pasta, rice, and legumes (peas and beans).

Cellulose

Cellulose is a complex carbohydrate found in plant cells. Cellulose, sometimes called ***roughage***, is made up of indigestible fibers. It does not supply energy to the body. Instead, it provides bulk to aid digestion and aids in the elimination of body wastes. The major sources of cellulose include green leafy vegetables, stalks of vegetables, seeds, the skins of fruits and vegetables, and whole–grain cereals. Many people in the United States eat too little cellulose because much of the food they eat is highly processed.

Effects of Cooking

In cooking, sugars dissolve in water. Starches mix with water and thicken when cooked. Save the water used to cook fruits and vegetables for use in soups, sauces, and gravies to prevent the loss of carbohydrates dissolved in the cooking water.

FAT

Fat is a concentrated source of energy. Fat provides more energy per gram than any other nutrient. Its main function is to supply energy for heat and the body's activities. Fat carries the fat-soluble vitamins (Vitamins A, D, E, and K) through the body. The body can only use these vitamins if fat is available to provide the transportation through the body. Some fat is stored in the body. Body fat, or ***adipose tissue***, provides insulation to keep the body at a constant temperature. It also helps protect such vital organs as the kidneys from injury and helps hold them in place.

The scientific name for fat and fatlike substances is ***lipids***. Fat is a compound made up of ***fatty acids*** and ***glycerol***, a body chemical. The body can manufacture most fatty acids. Like some of the amino acids which make up protein, however, some fatty acids cannot be manufactured by the body. These ***essential fatty acids*** must be obtained from food.

Types of Fat

Fat is either ***saturated***, ***unsaturated***, or ***polyunsaturated***. These terms refer to the amount of hydrogen in the chain-like chemical structure of fat. Saturated fats have the most hydrogen. Unsaturated fats have less hydrogen, and polyunsaturated fats the least hydrogen. These differences affect the appearance of fat at room temperature. The more saturated the fat is, the more solid it is. Animal fats, the most saturated fats, are the most solid at room temperature. Unsaturated vegetable fats in the form of shortening are less solid. Polyunsaturated oils are liquid. Sometimes manufacturers add hydrogen to oil, or hydrogenate it, to make it more solid at room temperature. For example, margarine may be made from hydrogenated polyunsaturated oils.

Cholesterol

Cholesterol is a lipid found in foods high in animal fat. You may recognize that the word, cholesterol, is often linked to heart disease. You may not know that cholesterol is an essential part of every cell in the human body. It helps form vitamin D when your skin is exposed to sunlight. It is an important part of many hormones and bile. The body itself manufactures cholesterol. People whose blood contains high levels of cholesterol may have a greater risk of heart disease than other people. However, scientists are still trying to discover how cholesterol, high-fat diets, and cardiovascular diseases are related. It is probably wise to consume only moderate amounts of fat. Drastic reductions of the amount of cholesterol in the diet are unnecessary unless advised by a doctor.

Effects of Cooking

Cooking has little effect on the nutritive value of fat except at very high temperatures. Fat which is allowed to smoke at high temperatures may give food a disagreeable taste and make it more difficult to digest.

VITAMINS

Vitamins regulate body processes and prevent specific diseases. Only small amounts of vitamins are needed in the diet. All vitamins are either fat-soluble or water-soluble.

Fat-Soluble Vitamins

The ***fat-soluble*** vitamins, A, D, E, and K, dissolve in fat. When more fat-soluble vitamins are eaten than needed by the body, they are stored in the body. Most of the excess is stored in the liver. When the body does not get enough of these vitamins, it uses any stored fat-soluble vitamins to meet its needs. If large amounts of fat-soluble vitamins are eaten, the amounts stored in the body can build up to harmful levels.

Vitamin A. Like all vitamins, vitamin A has several important functions in the body. Vitamin A is especially important in maintaining healthy skin and hair. It helps keep the ***mucous membranes***, or linings, of the mouth, throat, lungs, eyes, and other body openings healthy. It helps the body resist infections. Vitamin A helps the eyes adjust to sudden changes in light. Persons who do not get enough vitamin A may find it difficult to drive at night because their eyes will not adjust quickly to the changes in light caused by oncoming cars. This problem is called ***night blindness***.

Vitamin A is found in deep yellow-orange and deep green vegetables. The deep color in vegetables is usually, but not always, caused by carotene. ***Carotene*** is a substance which is converted to vitamin A in the body. Deep yellow-orange vegetables include sweet potatoes, carrots, and winter squash. Deep yellow fruits include cantaloupe, papayas, peaches, and apricots. The deep-green vegetables include leafy vegetables, such as broccoli, collard greens, mustard greens, and spinach. Carotene also causes the yellow coloring in butter, cream, and egg yolks. Liver is another animal source of vitamin A. All of these foods are excellent sources of vitamin A.

Vitamin D. The body cannot use calcium and phosphorus effectively without vitamin D. Vitamin D helps the body deposit these minerals in the bones and teeth. Vitamin D is essential for growing children and adolescents. It also maintains the level of calcium needed in the blood for clotting and keeping the heart, muscles, and nerves active. Vitamin D is often called "the sunshine vitamin." The body converts ultraviolet rays absorbed from the sunlight into vitamin D. Depending on where you live, the body may not get enough sunlight to make all of the vitamin D it needs. For this reason, vitamin D is added to all processed milk. Such milk is said to be "***fortified***" with vitamin D.

Vitamin E. Vitamin E helps protect cell membranes and vitamin A from being damaged by too much oxygen. Claims have been made that vitamin E slows down the aging process, heals scars, and increases sexual response. None of these claims are supported by scientific research. Vitamin E and polyunsatured fats are present in the same foods. Principle sources include vegetable and seed oils (soybean, cottonseed, corn), shortening, margarine, egg yolk, grains, liver, nuts, and green leafy vegetables such as lettuce and cabbage.

Vitamin K. Vitamin K is needed to make blood clot. This vitamin helps stop bleeding and reduces the likelihood of hemorrhaging. Good dietary sources of vitamin K are dark green vegetables (spinach, kale, cabbage leaves, peas), cauliflower, tomatoes, wheat bran, soybeans, and soybean oil.

Effects of Cooking. Fat-soluble vitamins are not easily lost in cooking. They neither dissolve in cooking water nor are destroyed by heat.

Water-Soluble Vitamins

The ***water-soluble*** vitamins are ***vitamin C*** and those vitamins included in the ***vitamin B complex***—thiamine, niacin, and riboflavin. These vitamins dissolve in water. They cannot be stored in the body. Excess amounts become part of body wastes. Because they are not stored, these vitamins must be supplied by the diet each day.

Vitamin C. ***Ascorbic acid***, or vitamin C, helps body cells form a "cement" called ***collagen***. Collagen holds body cells together, keeping them in place. It is important in forming and repairing bones and teeth. Vitamin C aids in the healing of wounds by assisting in the formation of strong scar tissue. It speeds the healing of cuts and wounds. Vitamin C keeps blood vessels strong. Injuries are less likely to cause blood to seep through cell walls and form bruises under the skin. When the tiny blood vessels in gums are strong, gums are healthier. Vitamin C also helps the body resist infection.

The best sources of vitamin C are citrus fruits. ***Citrus fruits*** include grapefruits, lemons, limes, oranges, and tangerines. Other fruits like apples, cranberries, peaches, pineapples, and strawberries contain smaller amounts of vitamin C. Some vegetables contain vitamin C. Broccoli, cabbage, green peppers, greens, potatoes, tomatoes, and turnips are examples.

Thiamine. Vitamin B_1 is the first of the vitamin B complex. ***Thiamine*** is another name for vitamin B_1. Thiamine helps the body use carbohydrate for energy. It helps maintain a healthy nervous system and healthy muscles. It promotes a healthy appetite and the digestion of food. Thiamine is found in many foods. Good sources of thiamine include lean meat, liver, eggs, nuts, dried peas and beans, whole-grain and enriched breads and cereals, and green, leafy vegetables.

Riboflavin. The second B vitamin, vitamin B_2, is called ***riboflavin***. Like thiamine, riboflavin helps the body produce energy from carbohydrate. It works with protein to promote growth in the cells. It helps keep the areas around the mouth, nose, and eyes healthy. It promotes good vision in bright light. And it helps the body resist infection. Milk and milk products like cheese and ice cream are good sources of riboflavin. Meat, poultry, fish, organ meats, and eggs are other animal sources of riboflavin. Whole-grain and enriched breads and cereals and green vegetables also make a good contribution.

Niacin. ***Niacin*** helps the body release energy. It helps maintain a healthy nervous system. It helps keep the skin smooth and helps maintain the skin around the mouth and throat. It also helps keep the gastro-intestinal tract healthy. Niacin is closely related to metabolism. The body can manufacture niacin from one of the eight essential amino acids. Niacin is closely related to complete protein. Meat, liver, fish, and poultry, as well as milk and eggs, are among the best sources of niacin. Other good sources are nuts, dried peas, beans, and whole-grain and enriched breads and cereals.

Other B Vitamins. Several other B vitamins help your body produce energy. These include vitamin B_6 (pyridoxine), vitamin B_{12} (cobalamin), folacin (or folic acid), pantothenic acid, biotin, and choline. These vitamins also play other roles in the body. Vitamin B_6 plays an important part in changing the amino acid tryptophan into niacin. Vitamin B_{12} and folacin are needed to make red blood cells. Deficiencies in these B vitamins can cause anemia. These vitamins are readily available in food and may be made by the body as well.

Effects of Cooking. Water soluble vitamins are easily lost during the storage and preparation of food. Store vitamin C foods in a cool, dark place in a covered container. Prepare, cook, and serve foods as quickly as possible. Soaking fruits and vegetables in water allows water-soluble vitamins to be lost. Instead, fruits and vegetables should be washed with a cold water spray before cutting or chopping. To minimize vitamin loss during cooking, cook fruits and vegetables in large pieces in as little water as possible. Cook fruits and vegetables only until done. Save the cooking water for use in soups, sauces, and gravies. Use the drippings from meats in making gravies. Avoid adding soda to green vegetables when cooking because it will destroy water-soluble vitamins.

MINERALS

Minerals are ***inorganic*** matter, neither plant nor animal. Minerals found in the earth are drawn from the earth by plants. Minerals in the diet come from plants or from animals that have eaten the plants. The body needs only small amounts of minerals, but their functions are essential. The body needs more calcium, phosphorus, sodium, chloride, potassium, and magnesium than other minerals. The minerals needed in the smallest amounts are called ***trace minerals***. The most important trace minerals are iron, iodine, fluorine, and zinc. Others are copper, sulfur, manganese, chromium, and molybdenum.

Calcium

The body contains more ***calcium*** than other minerals. Calcium builds, repairs, and maintains the bones, teeth, and fingernails. Calcium helps blood clot. It regulates the activities of the heart, muscles, and nerves. It helps the heart muscles contract and relax. It helps other muscles respond to ***stimuli*** such as pain or noise. Calcium is essential for growing children, but it is also needed by adults. When the supply of calcium in the blood is used up, more must be provided by food. The best sources of calcium are milk and milk products. Other sources of calcium are dark green leafy vegetables, such as broccoli and cabbage. Canned fish eaten with the bones, such as sardines and salmon, are another source of calcium.

Phosphorus

Calcium and ***phosphorus*** work together to build healthy bones and teeth. Phosphorus also helps the body produce energy. It is necessary for many other body processes. As with calcium, the best sources of phosphorus are milk and milk products. Dairy products supply the proper ratio of calcium to phosphorus. Egg yolks, meat, fish, and poultry are other good sources of phosphorus. So are whole-grain breads and cereals. The proportion of calcium and phosphorus may be thrown off balance by consuming too many soft drinks which have large amounts of phosphorus.

Sodium, Chloride, and Potassium

The minerals, ***sodium***, ***chloride***, and ***potassium*** work together to control body fluids. Sodium and chloride are found mostly in fluids outside body cells. They help maintain the body's water balance. Potassium is found mostly in fluids inside body cells. Together, body fluids help nutrients pass into cells and waste products to pass out of the cells. These three nutrients also help muscles like the heart contract and relax.

Magnesium

Magnesium is found throughout the body's tissues and in some body fluids. It must be present for many enzymes to work. ***Enzymes*** are substances that speed chemical reactions in the body. Magnesium aids in energy production. It helps muscles contract. It helps the body make protein. Good food sources of magnesium include nuts, legumes, cereals, dark green vegetables, seafoods, and whole grains.

Iron

Iron is found mostly in red blood cells. It is an important part of ***hemoglobin***. Hemoglobin is the substance in the blood which carries oxygen from the lungs to the cells. It also absorbs carbon dioxide from the cells and returns it to the lungs to be exhaled as waste. Iron makes it possible for hemoglobin to carry oxygen. Iron is easily stored in the body in muscles and in all body cells. The body even recycles iron as old blood cells are broken down. The body loses iron when bleeding occurs. Because women lose iron during menstruation, they need more iron in their diets than men do. Some iron is also lost when both men and women body shed worn out cells.

Liver is the best food source of iron. All meat and poultry provide iron. Egg yolks and green leafy vegetables are good sources. Some dried fruits, like apricots, raisins, and prunes, are good sources, but fresh fruit is not. The least expensive sources are enriched and whole-grain breads and cereals and dried legumes (peas and beans).

Iodine

The thyroid gland needs a small amount of ***iodine*** to produce a hormone called ***thyroxin***. Thyroxin controls the body's metabolic rate. If the body does not get enough iodine, the thyroid gland has to work harder and becomes enlarged. This enlargement is called a ***goiter***. Iodine occurs naturally in areas close to the sea in drinking water, in vegetables grown there, and in seafoods such as fish and ***shellfish*** (shrimp, oysters, crab). In other areas, an adequate source of iodine is iodized salt. ***Iodized salt*** is table salt to which a small amount of iodine has been added.

Fluorine

Fluorine, or ***fluoride***, is important for building strong teeth. Fluoride helps harden children's soft teeth. This helps prevent tooth decay. Fluoride may also help keep adults' bones strong. In many areas, water naturally contains fluorine. If not, it is often added to the water supply. Some dentists put fluorine on the surface of patients' teeth or recommend using a fluoride toothpaste.

Effects of Cooking

Minerals are soluble in water. They can easily be lost in cooking. To prevent mineral loss, do not soak vegetables during preparation. Cook vegetables in only a small amount of water. Save the cooking water to use in soups, sauces, and gravies.

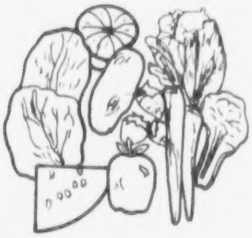
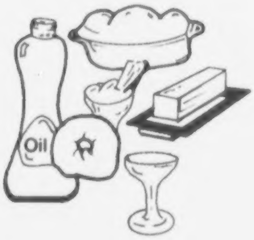
Food Selection

Research indicates that all people need the same basic nutrients but in different amounts. Age, sex, environment, body size, level of activity, and nutritional status influence the quantity of nutrients needed by each individual to maintain a strong, healthy body.

DAILY FOOD GUIDE

All of the foods we eat have been categorized into five groups. Together, these groups, named in the ***Daily Food Guide***, make up a complete diet. Four of the groups—Vegetable and Fruit, Bread and Cereal, Milk and Milk Products, Meat and Legumes—supply the nutrients the body needs, as well as all the calories needed for energy. The nutrients these four groups supply are vitamins, minerals, carbohydrates, and proteins.

The fifth group, Fats, Sweets, and Alcohol, provides mostly calories and few nutrients. This group's contribution to health is more limited than that of the other groups. Foods in this group are sometimes called ***empty-calorie foods***. These foods add variety and flavor to meals. Used in small amounts, they can add variety without adding too many calories. They should not, however, be substituted for foods from the other four food groups.

	Group	Best Source	Servings Daily
	Vegetable and Fruit	Vegetables and fruits.	Four. Include one good vitamin C source each day. Frequently include deep yellow or dark green vegetables (for vitamin A) and unpeeled fruits and vegetables and those with edible seeds, such as berries (for fiber).
	Bread and Cereal	Products made with whole grains or enriched flour or meal–bread, biscuits, muffins, waffles, pancakes, cooked or ready-to-eat cereals, cornmeal, flour, grits, macaroni and pasta, noodles, rice, rolled oats, barley, bulgur. Refined pastries, and flour products.	Four. Select only whole-grain and enriched or fortified products. Always include whole-grain bread or cereals. Check labels.
ice cream milk	Milk and Milk Products	Milk in any form–whole, skim, lowfat, evaporated, buttermilk, and nonfat dry. Yogurt, ice cream, ice milk, and cheese, including cottage cheese.	Children under 9 2-3 servings Children 9-12 3 servings Teens 4 servings Adults 2 servings Pregnant women 3-4 servings Nursing mothers 4 servings
	Meat and Legumes	Beef, veal, lamb, pork, poultry, fish, shellfish, dry beans or peas, soybeans, lentils, eggs, seeds, nuts, peanuts, and peanut butter.	Two.
	Fats, Sweets, and Alcohol	Foods like butter, margarine, mayonnaise and other salad dressings, and other fats and oils; candy, sugar, jams, jellies, syrups, sweet toppings, and other sweets; soft drinks and other highly sugared beverages; alcoholic beverages, such as wine, beer, and liquor.	No recommended number of servings.

Individuals can personalize the guide to their individual caloric needs. How many calories an individual needs depends on how much energy is used each day. Generally, older people need fewer calories than younger people, women need fewer calories than men (because women generally have a smaller proportion of muscle to fat tissue than men), and bridge players and bookkeepers need fewer calories than tennis players and construction workers. Persons who are overweight can cut portions from the fifth group, then, if needed, cut portion sizes from the other groups. Persons who are underweight can eat larger or additional portions from the first four groups and include some foods from the fifth group.

DIETARY GUIDELINES

Research shows that the American diet contributes to some of the chronic diseases that affect Americans in later life. Changing one's diet can reduce the risk of heart disease, some cancers, and strokes. To help Americans reach this goal, the U.S. Department of Health and Human Services and the U.S. Department of Agriculture (USDA) developed seven dietary guidelines. These dietary goals are:

- Eat a variety of foods.
- Maintain ideal weight.
- Avoid too much fat, saturated fat, and cholesterol.
- Eat foods with adequate starch and fiber.
- Avoid too much sugar.
- Avoid too much sodium.
- If you drink alcohol, do so in moderation.

The seven dietary guidelines are suggested for most Americans. They are intended for people who are already healthy. They do not apply to people who need special diets because of diseases or conditions that interfere with normal nutrition. These people may require special dietary instructions from trained dietitians. No guidelines can guarantee health or well-being. Health depends on many things in addition to diet, including heredity, lifestyle, personality traits, mental health, attitudes, and environment. Food alone cannot make you healthy. But good eating habits based on moderation and variety can help keep you healthy and even improve your present health.

Factors Affecting Eating Habits

A variety of factors affect what people eat. Among the influences on eating habits are cultural patterns, personal preferences, seasonal references, age, and health.

CULTURAL BACKGROUND

Cultural background often determines food customs and practices. For example, spaghetti and lasagna are foods which are part of the Italian culture. Rice, egg rolls, and soya sauce are part of the Chinese culture. Sausage, sauerkraut, and sauerbratten are associated with the German culture. Beans, tamales, and chili are foods from the Mexican culture.

Eating habits are also affected by religion. ***Kosher foods***, prepared according to strict, religious dietary laws, are associated with the Jewish religion. The kinds and amounts of foods eaten by Catholics are limited at certain times by religious practices.

Eating patterns also vary in different regions of the United States. Southerners may eat hominy grits for breakfast and fried chicken, black-eyed peas, and greens for dinner. New Englanders often eat baked beans and brown bread. Many Texans enjoy eggs rancheros, chicken fried steaks, mashed potatoes, and gravy.

The diets of persons at different income levels may be influenced by the amount of money available to spend on food. Persons with limited food budgets are likely to eat a more limited variety of foods than persons with more money to spend on food.

PERSONAL PREFERENCES

Children often develop food preferences early in life. These may be patterned after a parent or older sibling. Food preferences may be influenced by the way foods are prepared. Some people become accustomed to eating certain foods and may be hesitant to try new foods or foods prepared in unfamiliar ways. Eating habits are affected by incorrect beliefs. For example, many adults feel that milk is a food for babies and children, and some people believe that eating raw vegetables is harmful.

SEASON

The weather often affects people's appetites. Hot weather may create a desire for light meals of cold foods. Cold weather may cause people to want hearty meals of hot foods. In addition, people tend to associate certain foods with certain times of year. People often think of ice cream in the summer, pumpkin pie for Halloween, and roast turkey and cranberries for Thanksgiving and Christmas.

AGE

Dietary needs vary according to age. Young children often have small appetites. They may prefer finger foods and avoid strong flavored foods. Milk is an important part of children's diets. The elementary age child needs more food than the younger child. This is a good time to encourage a child to try new and different foods. Adolescence, occurring between the ages of 10 and 20, is a period of rapid growth and maturation. The formation of muscles, bone, and blood requires ample supplies of the building materials protein, calcium, and iron. Because of an increase in activity and a rise in basal metabolism, adolescents consume more food. The teenage girl needs more iron-rich foods than a teenage boy. Adolescents consume more fast foods such as hot dogs, hamburgers, French fries, and milkshakes than persons in other age groups. As growth ends and maturity is reached, the need for building materials declines, as does basal metabolism. Compared with adolescents, an adult has a lower need for protein and calcium. Like teenage girls, a woman needs more iron-rich foods than a man.

The major nutritional problem of adults is weight control. As a general rule, a person should maintain his or her ideal weight at age 25 throughout adulthood. As people add years, they need to subtract calories. This means avoiding pastries, rich cakes, gravies, nuts, candies, sugar, soft drinks, alcoholic beverages, and fried foods. As aging occurs, basal metabolism and activities slow down, resulting in a decreased energy need. The average man or woman aged 55-75 needs 300 to 400 fewer calories per day than those needed during the 35-55 year period. Older persons need smaller amounts of the B-complex vitamins. Many elderly people require special diets for various health conditions.

Eating patterns and appetite levels often change as people grow older. Adults may prefer eating at a seated restaurant to eating at a fast-food establishment. Many elderly persons enjoy the variety of foods available at low cost at a cafeteria. Elderly persons who live alone are especially likely to have a poor diet. The senses of smell and taste are changed with aging, so food may be less appetizing to the elderly person. Some elderly persons must be coaxed and encouraged to get them to eat.

HEALTH

Food preferences and nutritional needs are affected by health and by medications. Loss or impairment of teeth makes it difficult to chew. Problems may develop in adjusting to false teeth. A person who has had a stroke and is partially paralyzed may have impaired muscle ability. For example, a stroke victim with little or no feeling in one side of the face may have little control and no taste on that side of the mouth. A similar sensation results from a deadening of the mouth for dental work.

For various reasons in any stage of life, a person may need a ***modified diet***. A modified diet changes the normal diet to meet the body's requirements under special conditions. This procedure may be referred to as ***diet therapy***. A special diet may be needed by persons who are suffering from nausea or vomiting, who have serious infections, who are recovering from surgery, who have disorders of the digestive system, who are too weak to make an effort to chew, or who are recovering from surgery. A special diet may be needed by persons who are diabetic, who need to lose weight, who have liver, gall bladder, or certain cardiovascular diseases, or who have edema related to heart conditions, toxemia during pregnancy, or other swelling conditions caused by sodium remaining in the body.

ACTIVITY

A person's activities also affect eating. The more physically active a person is, the more calories are needed to meet the body's energy needs. The less physically active a person is, the fewer calories are needed by the body. If a person consumes more calories than the body needs for energy, weight gain occurs. If a person consumes as many calories as the body needs for energy, weight is maintained. If a person consumes fewer calories than the body needs for energy, the body must burn its own fat or protein to make up the difference and weight is lost.

Meal Patterns

The meals eaten, the types and amounts of foods eaten at each meal, and the time of day when meals are consumed vary in the United States. Attitudes toward between-meal snacks also vary.

BREAKFAST

The term ***breakfast*** means "break the fast." Because breakfast is the first meal in over 12 hours for most people, it should meet certain nutritional requirements. Breakfast should supply one-fourth to one-third of the day's nutrients. It should include at least one food from each of the four basic food groups. It should provide a source of Vitamin C to replenish the body's supply. It should provide a high-quality protein. It should offer a quick source of energy. It should satisfy until lunch. Unfortunately, breakfast does not appeal to everyone. Some people say that they do not feel hungry in the morning. Others say they do not have time to eat. Some people only want coffee.

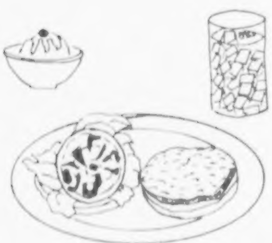
The traditional breakfast in this country includes fruits and juices; cereals with cream or milk; eggs; meats such as bacon, ham, sausage, and steak; breads such as pancakes, waffles, French toast, hot breads, and rolls; and beverages. In some areas hashed brown potatoes, grits, and refried beans are also served. Non-traditional food combinations such as pizza and an orange can also meet the nutritional requirements of breakfast.

Breakfasts vary from very light to heavy. A very light ***Continental breakfast*** may include juice, rolls, and beverages. A light breakfast might include fruit or juice, cereal or egg with toast, and a beverage. A medium-size breakfast might include fruit or juice, egg with bacon or sausage, toast, and a beverage. A heavy breakfast might include fruit or juice, cereal, egg with breakfast meat, toast, and a beverage. Fresh strawberries, melon, or other seasonal foods may be offered as specials.

Pancakes, waffles, or French toast may be the main course for a light breakfast. The meat is usually grilled. A choice of toast, sweet rolls, muffins, or biscuits may be offered.

LUNCH

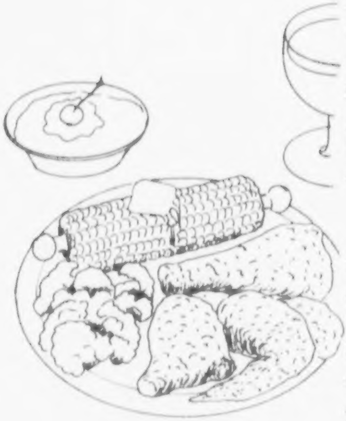
Like breakfast, ***lunch*** should include one serving from each of the basic four food groups. It should supply at least one-third of daily nutritional needs. In the United States, lunch is usually a light meal served at midday. If the heaviest meal is eaten at midday, it may be



called dinner. Working people, shoppers, and travelers often need quick service at lunch. Others may prefer a more leisurely lunch.

Lunch menus vary from light to very heavy. A light lunch might include a sandwich or salad and a beverage. A medium lunch might consist of a soup or salad and a sandwich with a beverage. A heavy lunch might include two dishes plus a dessert and a beverage. A very heavy lunch might include a main dish, a vegetable, a salad, bread, dessert, and a beverage. Sometimes foods associated with both breakfast and lunch are presented at a mid-morning meal called ***brunch***.

DINNER



Traditionally, ***dinner*** is the heaviest meal of the day. A light dinner may be called supper. Dinner should provide one-third or more of daily nutritional needs. A good dinner offers at least one serving from the meat group, two servings from the fruit and vegetable group, and one serving from the bread group. For children, a serving from the milk group should be included. Dinners should be nutritious and balanced in flavor, texture, temperature, color, and form. Use of a variety of methods of preparation make dinner menus more appealing.

Like lunches, dinners vary from light to very heavy. A light dinner might include a main dish containing protein, two vegetables, bread, and a beverage. A medium dinner might include a main dish, two vegetables, a salad, bread, dessert, and a beverage. A heavy dinner might begin with an appetizer followed by the main dish, two vegetables, salad, bread, dessert, and a beverage. A very heavy dinner might consist of an appetizer, then soup, followed by the main dish, two vegetables, salad, bread, dessert, and a beverage.

SNACKS

Foods eaten between meals are called ***snacks***. Snacks are usually quick foods like potato chips or French fries, a hamburger, a milk shake, a soft drink, or an ice cream cone. Snacks are often high in calories and low in nutrition. If wisely selected, snacks can fill the gaps in the day's intake of nutritious foods. Nutritious snacks include cheese, fruit, peanut butter, and nuts.

Nutrition and the Food Service Worker

The food service worker needs to have knowledge of nutrition principles and be able to apply this knowledge to food selection, preparation, and service. For example, back-of-the-house workers need to know how to store and prepare foods with minimum nutrient loss. Front-of-the-house workers need to maintain the nutritive value of foods during holding and serving. They also need to recognize and understand the social, cultural, and emotional uses of food by food service consumers.

Points To Remember

- Food meets physical, social, and emotional needs.
- Food provides fuel and building materials for the body. The energy value of food is expressed in calories. Protein, carbohydrates, and fats all produce energy when burned. Minerals and vitamins do not produce energy, but are important for body regulation, maintenance, and growth.
- Although water is not a nutrient, the body needs it to aid in digesting and absorbing of food, regulating body temperature, lubricating moving parts of the body, and aiding in the elimination of body wastes.
- Protein is made up of amino acids, eight of which cannot be manufactured in the body, but must be supplied by food. The body can manufacture nonessential amino acids from the eight essential ones.
- Protein is less digestible if cooked for a long time with dry heat or with high heat. Therefore, protein foods should be cooked at low heat until just done.
- Carbohydrate is the body's main source of energy. The three types of carbohydrates are sugar, starch, and cellulose. Sugars may be either monosaccharides or disaccharides. Starch is the most complex form of carbohydrate. Cellulose, or roughage, does not supply energy to the body, but provides bulk to aid in digestion and aids in the elimination of body wastes.
- Since sugars dissolve in water, the water used to cook fruits and vegetables should be saved for use in soups, sauces, and gravies.
- Fat is a concentrated source of energy made up of fatty acids and glycerol. Essential fatty acids must be obtained from food. Fat may be saturated, unsaturated, or polyunsaturated.
- Cholesterol is a lipid found in foods high in animal fat. Persons whose blood contains high levels of cholesterol may have a higher risk of heart disease than other people.
- Fat cooked at a high temperature has a disagreeable taste and may be more difficult to digest.
- Vitamins regulate body processes and prevent specific diseases. The fat-soluble vitamins (A, D, E, and K) can be stored in the body. The water-soluble vitamins (C and the B-complex vitamins thiamin, niacin, and riboflavin) must be replenished every day because they are not stored in the body.
- Water-soluble vitamins are easily lost during the storage and preparation of food, but fat-soluble vitamins are not.
- Minerals have essential functions in the body. Those needed in the greatest amounts include calcium, phosphorus, sodium, chloride,

potassium, and magnesium. The trace minerals are needed in very small amounts. The most important trace minerals are iron, iodine, fluorine, and zinc.

- The Daily Food Guide is made up of the following five groups: vegetable and fruit, bread and cereal; milk and milk products, meat and legumes; and fats, sweets, and alcohol. Eating the recommended number of servings of foods in the first four groups should meet the body's nutritional needs; the fifth group adds variety and flavor to meals, but supplies mostly empty calories.
- Current dietary goals for Americans include: eat a variety of foods; maintain ideal weight; avoid too much fat, saturated fat, and cholesterol; eat foods with adequate starch and fiber; avoid too much sugar; avoid too much sodium; and if you drink alcohol, do so in moderation.
- Factors which affect people's eating habits include cultural background, personal preferences, season, age, health, and activities.
- Meal patterns vary in terms of meals eaten, the types and amounts of food eaten at each meal, and the time of day when meals are consumed. In the United States, the typical pattern includes breakfast, a light lunch at midday, and a heavier dinner in the evening, plus snacks.

Words To Know

adipose tissue
amino acids
antibodies
ascorbic acid
breakfast
brunch
calcium
calories
carbohydrates
carotene
cellulose
chloride
cholesterol
citrus fruits
coagulates
collagen
complete protein
Continental breakfast
Daily Food Guide
dextrose
diet therapy
dinner
disaccharides
empty-calorie foods
enzymes
essential amino acids
essential fatty acid
ketosis
Kosher foods
lactose
lipids
lunch
magnesium
maltose
minerals
modified diet
monosaccharides
mucous membranes
niacin
night blindness
nonessential amino acids
nutrients
phosphorus
polysaccaride
polyunsaturated
potassium
protein
riboflavin
roughage
saturated
shellfish
snacks
sodium
starch

fat
fatty acid
fluorine or fluoride
fructose
galactose
glucose
glycerol
goiter
hemoglobin
hormones
incomplete protein
inorganic
iodine
iodized salt
iron
stimuli
sucrose
sugars
thiamine
thyroxin
trace minerals
unsaturated
vitamin A
vitamin B complex
vitamin C
vitamin D
vitamin E
vitamin K
vitamins
water-soluble

Questions For Review

1. What are the functions of food?
2. What are five types of nutrients needed by the body?
3. How is the energy value of food measured?
4. What are the functions of protein in the body?
5. What are the smaller units which make up protein? Why are some considered essential and some nonessential?
6. What are the functions of carbohydrates in the body?
7. What are the three types of carbohydrate? Which does not supply energy to the body?
8. What are the functions of fat in the body?
9. What are the three types of fat? How is cholesterol related to fat?
10. Why are vitamins needed in the body? What is the difference between fat-soluble and water-soluble vitamins?
11. What are three functions and three sources of each of the following vitamins?
    a. vitamin A
    b. vitamin D
    c. vitamin E
    d. vitamin K
    e. vitamin C
    f. thiamine
    g. riboflavin
    h. niacin
12. What are the functions and sources of each of the following minerals?
    a. calcium
    b. phosphorus
    c. sodium
    d. chloride
    e. potassium
    f. magnesium
    g. iron
    h. iodine
    i. fluorine

13. What are trace minerals?

14. How can loss of each of the following nutrients be prevented during food preparation and cooking?
    a. protein
    b. carbohydrates
    c. fat
    d. fat-soluble vitamins
    e. water-soluble vitamins
    f. minerals

15. Name the five food groups in the Daily Food Guide. Identify food sources and the number of servings recommended daily in each group.

16. What seven dietary guidelines have been identified for Americans?

17. What are five factors which affect eating? Describe ways each factor affects eating habits.

18. Describe typical meal patterns in the United States. How much of the day's nutritional needs should be met at each meal? by snacks?

8

Chapter Eight
Special Diets

COMPETENCIES TO DEVELOP

- Define and use correct diet terminology.
- Identify menus for general and modified diets.
- Adapt menus for modified diets.
- Follow diet instructions in preparing general and modified diets and diet supplements, and in assembling trays.
- Report patient food response to supervisor.

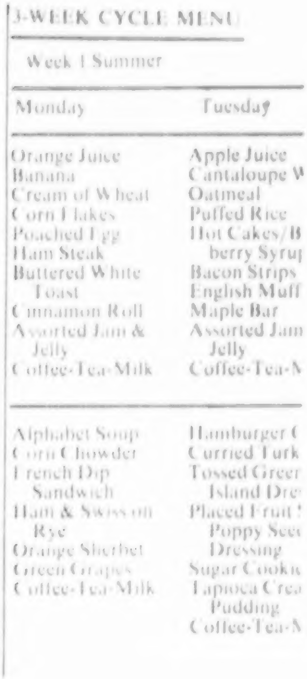
OBJECTIVES TO ACHIEVE

- Explain the use of cycle menus.
- Summarize special dietary considerations in planning meals for young children.
- Describe requirements for school cafeteria menus.
- Summarize dietary requirements of the sick and aging.
- Describe the most commonly used therapeutic diets.

Food service workers need an understanding of special diets. In commercial food service establishments, workers must answer questions from customers about the way foods are prepared and about the ingredients used. They may be asked to suggest menu items which fit the customer's dietary needs. Occasionally, customers request that a dish be prepared especially to meet their dietary needs. Some restaurants and cafeterias offer low-calorie or other special items to meet customer's needs. But, in general, commercial food service establishments make major diet and menu changes only in response to massive consumer demand. Salad bars, restricted salt usage in cooking, and posted calorie information (and sometimes nutrition and exercise information) are examples of changes that have occurred because of massive consumer demand.

Institutional food service operations plan menus to meet the needs of the persons served. Child care facilities plan meals which appeal to young children and meet their special nutritional needs. School food service programs plan menus to meet the nutritional needs of elementary and secondary school children for breakfast and lunch. Hospitals plan a variety of diets to meet the needs of patients with various health problems. Nursing homes and homes for the elderly plan meals which appeal to older persons who may have a variety of special needs.

Cycle Menus



3-WEEK CYCLE MEN

Week 1 Summer

Monday	Tuesday
Orange Juice	Apple Juice
Banana	Cantaloupe W
Cream of Wheat	Oatmeal
Corn Flakes	Puffed Rice
Poached Egg	Hot Cakes/B berry Syru
Ham Steak	Bacon Strips
Buttered White Toast	English Muff
Cinnamon Roll	Maple Bar
Assorted Jam & Jelly	Assorted Jam Jelly
Coffee-Tea-Milk	Coffee-Tea-M
Alphabet Soup	Hamburger C
Corn Chowder	Curried Turk
French Dip Sandwich	Tossed Greer Island Dre
Ham & Swiss on Rye	Placed Fruit Poppy Seec Dressing
Orange Sherbet	Sugar Cooki
Green Grapes	Tapioca Crea Pudding
Coffee-Tea-Milk	Coffee-Tea-M

Planning cycle menus is not one of the normal duties of the entry-level dietary aide or the food service employee. However, the beginning employee should understand how a cycle menu works and why it is used in some food service establishments.

Cycle menus are a set of carefully planned menus. They cover a period of three to six weeks. When the period is completed, the cycle is repeated again. Because the availability of food varies with the seasons, a different set of cycle menus may be developed for winter, spring, summer, and fall. In health care facilities, cycle menus for the most frequently prescribed modified diets may be developed to accompany regular menus.

Cycle menus save time in menu planning. Once they are set up, they can be used over and over with minor changes to allow for any unexpected development. Before using each menu of the cycle, the menu should be reviewed to determine whether any changes are needed. It is possible that a food selected for a certain day may not be available and a substitution will need to be made or a change in menus may be necessary when a holiday occurs. As the menus are used, a record should be kept of their acceptance, the recipes, the amounts of food prepared and left over, and other useful information. This information aids in perfecting the menus in each cycle.

Meals for Young Children

Several factors influence the meal and snack requirements of young children in child care facilities. Children's nutritional needs are the most important consideration. State licensing standards for child care centers contain food service and nutrition guidelines which must be followed. These guidelines determine how foods are handled, served, and stored. Regulations also specify the kinds and amounts of foods to be served. For example, Texas minimum standards require that food served a child cared for from five to nine hours a day meet at least one-third of the child's daily food needs. If a child care center receives funding from an outside source, the guidelines of the funding agency must also be followed.

Young children often have special food likes and dislikes. Children usually like colorful, attractively arranged foods. They like foods that can be held, like orange slices, peeled apple slices, and seedless grapes. They like meat cut in little pieces. They do not like bitter or sharp tastes. Children like crunchy foods like carrots and crackers.

They like foods which are neither too hot nor too cold. Most children do not like gummy foods. They do not like vegetables with strings in them, like celery. Children generally do not like foods mixed together in one dish with the notable exception of pizza.

Childhood is a good time to introduce a wide variety of foods because children are curious and enjoy new experiences. The more foods a person likes, the more likely that one's nutritional needs will be met. A child care center's menus should reflect the cultures of the children in the center. Effective menu planning will involve knowledge of the foods and food preparation methods of the various cultures represented. For this reason, it is a good idea to involve parents in the menu planning. Serving a familiar cultural dish supports children's self-concepts and encourages positive feelings about individual differences.

The menus of the child care center may be prepared by an individual such as the center director or a nutritionist. A menu planning committee might include the center director, a nutritionist, the cook, a caregiver, and a parent. Each of these individuals contributes unique and important information to the menu planning process. The group can meet about four times a year to prepare cycle menus.

School Cafeteria Menus

Planning school cafeteria menus is *not* one of the normal duties of the beginning food service employee. However, the food service employee should understand how a school cafeteria menu works.

The major goal of all school cafeteria programs is to serve attractive, nutritious, and low-priced meals. Menu planning plays a very important role in the operation of a school cafeteria program. Lunch and breakfast menus, if offered, must meet the federal government's School Lunch Pattern and School Breakfast Pattern requirements, which are used as guides for planning nutritionally balanced meals for children. The School Lunch Pattern provides a framework to meet approximately one-third of the student's dietary needs over a period of time. The regulations state that the school lunch and breakfast patterns should consist of a minimum of the food components in the amounts indicated below. The kinds and amounts of foods listed are based on the dietary needs of 10- to 12-year-old children.

MINIMUM REQUIREMENTS FOR SCHOOL MENU PATTERNS[1]

Breakfast	Lunch
1/2 pt. of fluid whole milk	1/2 pt. fluid milk as a beverage
1/2 cup of fruit, or fruit or vegetable juice	2 oz. edible portion of lean meat, poultry or fish, 2 oz. cheese, 1 egg, 1/2 cup cooked dry beans or dry peas, 4 Tbsp. of peanut butter or an equivalent quantity of any combination of the foods listed above
1 slice of whole grain or enriched bread or an equivalent serving of biscuits, muffins, rolls, etc., or 3/4 cup serving of enriched, whole grain, or fortified cereal	3/4 cup serving of 2 or more vegetables or fruits, or both
A protein-rich food is recommended as often as practicable.	Whole grain or enriched bread, 8 oz. per week.

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[1] USDA standards, based on the dietary needs of 10- to 12-year old children.

Proper nutrition is the main concern in the planning, preparation, and service of meals in the school cafeteria. When planning nutritious meals for school food service, the food groups listed in the Daily Food Guide are a very important aid. The foods listed in the school lunch and breakfast pattern follow the Daily Food Guide.

Meals must be acceptable to the students. The quality, appearance, and appeal of the food affects its acceptance. Including familiar foods and foods with contrasting colors, textures, flavors, sizes and shapes increases the meal's appeal.

Meals in Hospitals and Nursing Homes

The patient or resident is the most important person in any health care institution. A ***patient*** is a person who is hospitalized or who is confined to a room in a nursing home. A ***resident*** is a person in a nursing home who is ***ambulatory*** (able to walk) and can leave his or her room to eat in the dining room. To provide proper care for the patient or resident in a health care institution, the dietary personnel should understand the effect of illness or aging on dietary needs.

Patients and residents in hospitals and nursing homes may react differently to food than they would in other circumstances. Food has many meanings. It does more than satisfy one's physical needs; it helps also to meet one's social needs. Food service in nursing home dining rooms provides opportunities for contact with other people and a chance to socialize. Food and understanding go together, especially for older people and those who are ill.

The residents or patients in a nursing home have many adjustments to make. It may take them some time to adjust to living in an institution. In addition to the change in environment, a resident or patient may have a ***chronic illness*** (one that lasts a long time). Persons with chronic illnesses may be discouraged or depressed. This attitude is often reflected in their feelings toward eating and may result in loss of appetite. Patient food response should be reported to a supervisor.

In other instances, residents may be lonely and feel that they are out of touch with family and friends. They are now in a situation where they are dependent on others to do things that they were once able to do for themselves. The residents or patients may feel that no one really cares for them and that they no longer count. These emotional reactions may affect the eating habits of residents in one of two ways. They may either lose interest in food and not eat enough, or they may eat too much. In an institutional environment, there may be a difference in the eating behavior of persons who are able to eat in a dining room and those who must receive meals in their rooms. There are several advantages in providing dining room service for ambulatory residents:

- Eating with others helps improve the appetites of residents.
- Residents get exercise coming to the dining area, which helps formerly bedfast patients to regain their strength.

- The morale and sociability of residents is improved.
- Residents show an increased interest in their personal appearance.

Diet Therapy

Diet therapy is the procedure of changing normal diets to meet the body's requirements under special conditions. These special conditions deal primarily with the aging process and various illnesses.

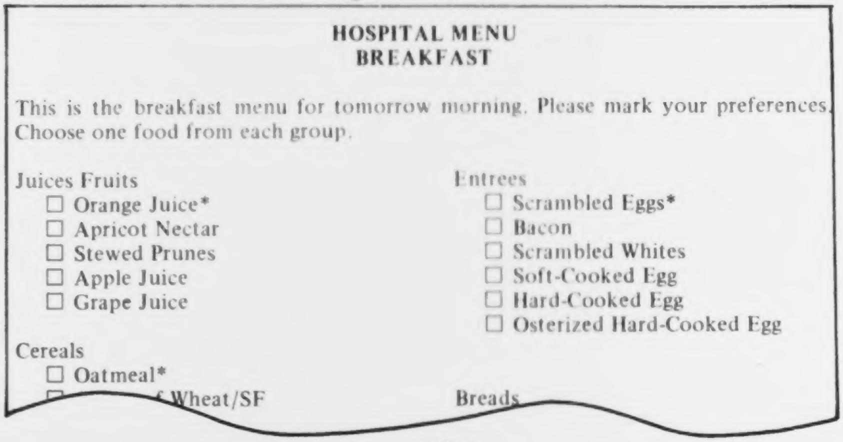
The planning of therapeutic diets is not one of the usual duties of a dietary aide or food service employee. It is the responsibility of the dietitian. However, the beginning employee should have a thorough understanding of the various diets which are prepared in most hospitals and homes for the sick and elderly.

Employees in any type of institution which provides specialized diets for its residents or patients should be aware of the extreme importance of following prescribed diets strictly. If a person is given food which is not on his or her diet, very serious problems in the health of the individual could result, or even involve the employee or institution in a serious lawsuit.

GENERAL DIETS

The ***general or regular*** diet is based on a normal, adequate diet and includes recommended amounts of foods from the food groups in the Daily Food Guide. Most of the patients in a hospital are on the regular diet. A patient may be placed on a therapeutic diet for a short time due to special conditions, such as recent surgery. Many patients are then returned to the regular diet before leaving the hospital. A home for the aged also provides a regular diet for its residents; but if therapeutic diets are required by certain residents, such as diabetics, special diets are served to these residents on a regular basis.

Most hospitals offer a ***selective menu*** for their patients. The patients may then choose the foods they prefer from those offered. Having a choice in food is very important to patients. They are much more likely to eat food they have chosen. Any diet is successful only if the food is eaten. Some hospitals offer selective menus to patients on therapeutic diets as well as those on the regular diet.



HOSPITAL MENU
BREAKFAST

This is the breakfast menu for tomorrow morning. Please mark your preferences. Choose one food from each group.

Juices Fruits
- ☐ Orange Juice*
- ☐ Apricot Nectar
- ☐ Stewed Prunes
- ☐ Apple Juice
- ☐ Grape Juice

Cereals
- ☐ Oatmeal*
- ☐ f Wheat/SF

Entrees
- ☐ Scrambled Eggs*
- ☐ Bacon
- ☐ Scrambled Whites
- ☐ Soft-Cooked Egg
- ☐ Hard-Cooked Egg
- ☐ Osterized Hard-Cooked Egg

Breads

THERAPEUTIC DIETS

A ***therapeutic diet*** is part of the treatment to improve a patient's health. When doctors feel that certain changes should be made in a patient's diet, they give orders in exactly the way that they would order medicines or any other treatment. The modification is then made by the dietitian. Although most hospitals have standard diets for specific conditions, it is important to understand that each patient is considered individually.

A diet can result in weight change; it can be designed to allow certain body organs to rest; it can be made up of foods which can be digested by an improperly functioning digestive tract; or it can be designed to overcome specific nutritional inadequacies. At one time, changes in normal diets were thought of as withholding certains foods. However, in many instances a modified diet adds foods to a normal diet. Therefore, emphasis should be placed on allowed foods, rather than a long list of foods to avoid.

Patients accept a therapeutic diet more readily if they are given some explanation of its meaning. Some hospitals place an explanation card on the patient's tray. The card may say that the doctor has requested the diet modification and that the dietitian will call on them if they have any questions about the diet. Stress should be given that the diet is an important part of the patient's treatment. However, explanation of the diet is the doctor's responsibility, not the employee who serves it.

Most institutions provide their employees with a diet manual that lists all of the modified diets available. Some of the more commonly used therapeutic diets are bland, diabetic, calorie-restricted, calorie-controlled, fat-restricted, liquid, soft, and sodium-restricted (salt-restricted). Descriptions of these diets, their uses, and examples of foods allowed are given in the chart below. Any additional types of therapeutic diets will be listed in the dietary food services diet manual.

Therapeutic Diets

Diet	Description	Uses	Examples of Foods Allowed
Liquid	Less irritating than solid food; feed six or more times during hours patient is awake.	Acutely ill patient; patient who has difficulty chewing or swallowing.	Depends on whether clear-liquid or full-liquid diet is prescribed.
Clear-liquid	Consists of liquids which are clear in color. Supplies very few nutrients but does give the body necessary fluids. Usually given for only one or two days.	Used when patient cannot take food or when there is nausea or vomiting.	Gelatin, broths, tea, some carbonated beverages, apple juice.
Full-liquid	All-liquid diet which meets all the nutritional needs of patient. Can be used longer length of time than clear-liquid diet. Cream may be added to milk and milk drinks to increase calorie value and to help reduce hunger pangs. Corn syrup or lactose (milk sugar) can be used to add calories.	Follows clear-liquid diet as patient improves.	Milk, eggnog, citrus and other juices, broth, coffee, tea, carbonated beverages, gelatin, sherbet (no pulp), cereal gruel, strained vegetable juices.

Diet	Description	Uses	Examples of Foods Allowed
Soft	Nutritionally adequate diet consisting of soft-textured foods or foods which have been changed or strained and are easily digested. Raw fruits and vegetables are not permitted, and tough meats should be avoided. Coffee and tea are usually limited.	Generally follows the liquid diet. Used for patient with serious infection, patient recovering from surgery, one having a disorder of the digestive system, or one who is too weak to make an effort to chew.	Milk, soft eggs (not fried), tender or chopped meats (not fried or highly seasoned), potatoes, and selected cooked vegetables, some cooked and canned fruits, toasted white bread, crackers, cooked cereals (no hot breads).
Bland	Diet compound of mild-flavored foods which are not especially sweet, sour, sharp, bitter, or strong. Foods with coarse fibers should be avoided, as well as fried foods and strongly flavored vegetables, such as onions, dried beans, cabbage, and cauliflower. Coffee and tea should be limited or omitted because of the stimulating effects of caffeine.	Sometimes given after full liquid diets or for patients with healing internal open lesions.	Applesauce, ripe bananas, creamed soups, vanilla ice cream, sugar cookies, cooked pears, cottage cheese, plain gelatins, plain cake, plain custards and puddings, milk, macaroni, potatoes, soft eggs, rice, bread, cereal products such as farina and cream of wheat, and baked or broiled meats, fish, and poultry.
Diabetic	Modified normal diet specifying exact amounts of protein, fat, and carbohydrate needed by patient.	Used to restrict amounts and types of certain foods to help control diabetes. Also used in weight reduction diets and for diets of some ***cardiovascular*** (heart) patients.	Uses ***exchange list*** composed of six food groups. Foods in each group have comparable food values. One food may be substituted for another in the same group. Examples: An exchange for 1 slice of bread is ½ c. cooked cereal or ½ c. mashed potatoes.
Calorie-restricted	Limited calorie content, but nutritionally adequate.	Used for weight reduction	Often utilizes exchange system.
Calorie-controlled	Adjusts calorie intake to maintain weight loss.	Used to maintain weight without gaining or losing.	Utilizes exchange list.
Fat-restricted	Nutritionally adequate, but may be low in calories due to fat restriction. May be supplemented by additional amounts of protein and carbohydrate. May cause loss of appetite.	Used for patients with liver, gall bladder, and certain cardiovascular diseases.	Foods low in fat.
Sodium-restricted	Nutritionally adequate diet with limited amounts of salt and foods high in sodium content. May result in loss of appetite.	Used when there is ***edema (sodium retention)*** related to heart conditions, toxemia of pregnancy, and other swelling conditions.	*Avoid* bacon, ham, corned beef, olives, sauerkraut, sausage, potato chips, salty crackers, pretzels, saltwater fish, and shellfish.

NOURISHMENTS AND SUPPLEMENTAL FEEDINGS

Patients may need extra nourishment in addition to regular meals as part of their treatment. To meet the patient's needs, the physician may order milk drinks, fruit juice, ginger ale, or special beverages. These beverages may or may not be accompanied by a wafer or cracker. Extra beverages and foods during the day or evening are called ***nourishments***.

Supplies for supplementary feedings are usually ordered from each floor by a nursing supervisor. The orders are received and processed through the dietary department. Dietary personnel may be responsible for delivering the supplies to the floor. Patients suffering from malnutrition or health problems such as ulcers may need special feedings. The physician may order items such as milk or cream, eggnog, ice cream, or tube feedings as a diet ***supplement*** to the patient's regular meal schedule. Dietary personnel prepare these supplements according to the dietitian's orders. Special feedings which are part of the patient's diet therapy are called ***supplementary feedings***.

Sustagen is a nourishment give either orally or by tube to sick patients. It is high in calories, proteins, vitamins, and minerals; and it is bland and nonirritating. It is essential that instructions be followed specifically and strict sanitary measures be taken.

Two dilutions of sustagen are most commonly used. The more concentrated dilution requires equal amounts of sustagen and water. It is recommended for oral use and for intermittent tube feedings by syringe or flask. The less concentrated dilution is made using twice as much water as sustagen and is used for continuous drip feeding.

Sustagen is easy to prepare. If large amounts are needed, the measured sustagen powder is placed on the surface of the required amount of liquid and allowed to stand until it is moistened. Then it is mixed with a mechanical mixer or an eggbeater until smooth. The bubbles should be allowed to disappear before it is used. Small amounts of sustagen can be prepared in a shaker.

When sustagen is properly prepared, it will not need straining. If, however, lumps occur due to hasty mixing, they should be strained out prior to tube use.

Sustagen should be stored in the refrigerator. It should be stirred before tube use if it has been refrigerated very long.

Points To Remember

- Cycle menus are a carefully planned set of menus covering a three- to six-week period, which are repeated over and over during the period or season for which they were planned.
- State licensing standards for child care centers include guidelines regarding food service and nutrition which must be followed.

- Meals for young children should reflect their food likes and dislikes, introduce a wide variety of foods, and consider the food preferences of the cultures represented.

- School cafeteria menus should provide attractive, nutritious, low-priced meals which meet the federal government's School Lunch Pattern and School Breakfast Pattern requirements. The School Lunch Pattern provides a framework to meet approximately one-third of the student's dietary needs over a period of time.

- Patients and residents in hospitals and nursing homes may react differently to food than they would in other circumstances.

- Diet therapy is the procedure of changing normal diets to meet the body's requirements under special conditions, usually aging or illness.

- A general or regular diet is based on a normal, adequate diet and includes recommended amounts of foods from the food groups in the Daily Food Guide. Most of the patients in a hospital are on the regular diet.

- Orders for a therapeutic diet are given by the patient's doctor. The modification is then made by the dietitian.

- A diet manual provides information about the therapeutic diets used by a particular institution.

- The most common therapeutic diets include liquid, soft, bland, diabetic, calorie-restricted, controlled-calorie, fat-restricted, and sodium-restricted.

- Extra food and beverages in addition to a patient's regular meals are called nourishments. Nourishments include milk drinks, fruit juice, ginger ale, or special beverages. These beverages may or may not be served with a wafer or cracker.

- Supplementary feedings are special feedings which are part of the patient's diet therapy. These may be prescribed for patients suffering from malnutrition or health problems such as ulcers.

- Sustagen is a calorie- and nutrient-rich nourishment given either orally or by tube to patients who are very sick.

Words To Know

ambulatory
cardiovascular
chronic illness
cycle menus
diet supplement
diet therapy
edema
exchange list
general or regular diet
nourishments
patient
resident
selective menu
sodium retention
supplementary feedings
sustagen
therapeutic diet

Questions For Review

1. Describe what a cycle menu is and how it is used.

2. What factors influence the meal and snack requirements of young children in child care facilities?

3. What is the major goal of a school cafeteria program? What are the requirements for the School Lunch Pattern and the School Breakfast Pattern?

4. Why may patients and residents in hospitals and nursing homes react differently to food than they would in other circumstances?

5. What are the advantages of providing dining room service for ambulatory residents of nursing homes?

6. What is diet therapy?

7. What is a general diet and for whom is it provided?

8. Name and describe the eight most common types of therapeutic diets?

9

Chapter Nine
Tools and Utensils

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.

OBJECTIVES TO ACHIEVE

- Differentiate between tools and utensils.
- Select appropriate tools for food preparation and service tasks.
- Select appropriate utensils for food preparation and service tasks.
- Select appropriate equipment for transporting food and supplies.

A variety of small equipment is used in preparing and serving food. Most small equipment used in food service establishments can be classified as either tools or utensils. ***Tools*** are hand-held equipment such as knives, spatulas, spoons, and turners. ***Utensils*** are containers for holding food. Food service employees should report tools and utensils needing repairs to the supervisor.

Many of the tools and utensils used in the food service establishment are similar to those used in the home. Those used in commercial food service may be larger and more durable, but their uses are the same.

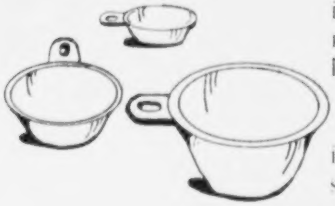
Tools

Tools are used in all aspects of food preparation. Some are also used in serving food. Food service workers should be able to identify the tools available and select the appropriate one for each task.

MEASURING

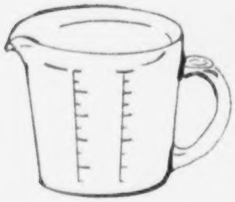
Quality in food production cannot be achieved unless ingredients are carefully measured. Costs cannot be controlled unless foods are carefully portioned or divided into servings of consistent size.

Cups and Spoons



Measuring cups and spoons are used for measuring liquid and dry ingredients which are not weighed. These types of measures include dry measuring cups, liquid measuring cups, measuring cups for either dry or liquid ingredients, and measuring spoons.

A set or "nest" of four U.S. Standard graduated ***dry measuring cups*** includes 1 cup, 1/2 cup, 1/3 cup, and 1/4 cup. Those made of stainless steel or aluminum are preferred.

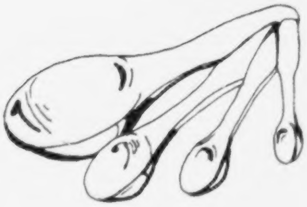


Liquid measuring containers have a rim above the graduated measurements to prevent spilling the liquid. Clear plastic is recommended because glass chips easily. Liquid measuring containers are available in several sizes:

- 1-cup size with lines indicating 1/4-cup and 1/3-cup intervals
- 1-pint size with lines indicating 1/4-, 1/3-, and 1-cup intervals
- 1-quart size with lines indicating cup intervals
- 2-quart size with lines indicating cup intervals
- 1-gallon size with lines indicating quart intervals

A liquid/dry measuring cup is a measuring cup for either liquid or dry ingredients. It has limited use for dry ingredients because only full cup measurements can be leveled off. The 1-cup measure has fractions indicated by ridges on the outside and grooves on the inside.

A measuring and mixing bowl set consists of 1-cup, 1 1/2-pint, and 2-quart containers which have tapered pouring spouts. These bowls can be used both for measuring and mixing.



Measuring spoons are used for measuring small amounts of liquid or dry ingredients. A U.S. Standard graduated set includes 1/4 teaspoon, 1/2 teaspoon, 1 teaspoon, and 1 tablespoon. Some sets include a 1/8 teaspoon as well.

When using cups and spoons for measuring, observe the following guidelines:

- Use cups which have the rim above the "full cup" line and a pouring lip or spout for measuring liquids.
- Use cups without the rim or pouring lip for measuring dry ingredients and shortening.
- Use graduated spoons for measuring small amounts of liquids and dry ingredients.
- Use larger measures, whenever possible, to avoid filling the smaller measure several times.

When measuring specific ingredients using cups and spoons, the following guidelines will ensure accuracy:

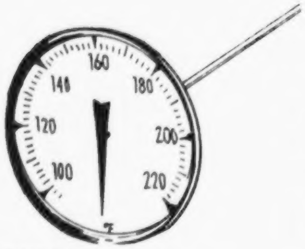
Flour	Usually weighed or stirred and measured in large quantities. In smaller quantities, sift flour before measuring to make it light and to remove any lumps. Spoon or scoop sifted flour gently into cup. Do not shake, pack, or

	hit the side of measuring cup. Move a straight-edged knife or spatula across top edge of measuring container to remove excess flour.
Confectioner's sugar	Measure in the same way as flour.
Brown sugar	Pack firmly into measuring container (unless stated otherwise) to ensure accuracy of the measurement. When loosely packed, the amounts of brown sugar vary from one measuring to the next.
Fats (solid)	Measure by pressing firmly into measuring container and leveling off.
Liquids	Place measuring cup on a flat surface and read measurement at eye level.
Few grains, speck, pinch	Use amount of the ingredient which can be held between thumb and forefinger.
Fractions of a teaspoon or tablespoon	Fill and level correct size measuring spoon. If the correct size spoon is not available, use a full teaspoon or tablespoon. Run a knife lengthwise through the center of the spoon for a ½ spoonful measure and then crosswise through the center of the spoon to divide the ingredients into ¼ spoonfuls.

When caring for measuring equipment, observe these practices:

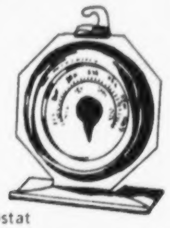
- Wash thoroughly after each use.
- Use plastic measures carefully because they warp easily and are then no longer accurate.
- Handle glass measures carefully because they chip easily.
- Care for measuring spoons by using them only for measuring—not for mixing or stirring.
- Store measuring equipment carefully because bent measures are no longer accurate.

Thermometers



meat thermometer

Thermometers are used in food service to measure the temperature of food, fat, and air. A ***confectionary thermometer*** is used to measure the temperature of frosting or candy during preparation. A probe-type ***meat thermometer*** is inserted into a large piece of meat like roast or poultry to measure its internal temperature while cooking. A ***dial-type thermometer*** is used for checking the temperature of the air inside ovens, refrigerators, and freezers. A ***fat thermometer*** is used to check the temperature of fat used for deep fat frying.



oven thermostat

Ovens, refrigerators, freezers, and deep fryers are equipped with ***thermostats***. A thermostat is a device that automatically measures and adjusts the temperature. However, the accuracy of thermostats should be checked with a thermometer regularly.

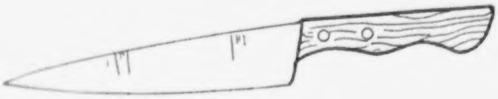
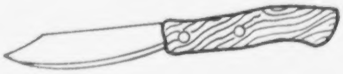
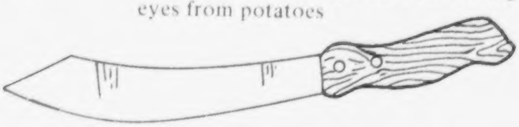
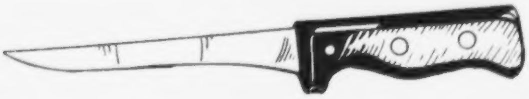
CUTTING

Cutlery or cutting tools are essential in every kitchen. There are so many types of knives and cutting devices that selecting the right one for a particular task can be a puzzling experience. Each has been made for specific uses. Selection of the best cutting tool for each task can make the job easier and help ensure that the task is done correctly.

Knives

Illustrations and purposes of some of the most commonly used knives, their common sizes, and their common uses are described in the chart below.

KNIVES

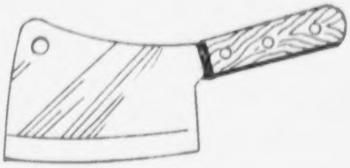
TYPES AND DESCRIPTIONS	USES
FRENCH 8- to 12-inch blade of carbon or stainless steel ***Hint for Using***: Hold point of knife on cutting board with one hand. Use other hand to lift handle of knife in an up-and-down slicing motion.	 Slicing and cutting raw fruits and vegetables; slicing hot or warm meat; chopping small quantities of materials, such as parsley, onions, and nuts; dicing and mincing ingredients
PARING 3- to 3½-inch blade of carbon or stainless steel	 Paring fruits and vegetables; removing eyes from potatoes
BUTCHER Slightly curved, heavy, rigid with a blunt tip	 Disjointing fowl; preparing blade spareribs, pork loin; cutting brisket, short ribs from rib roast, chuck roast, rump; cutting lobster, crawfish; scaling fish; removing head of fish; cutting sweet potatoes, cabbage, watermelon, squash
BONING 5- to 6-inch blade made of stainless or carbon steel; wooden or plastic handle	 Disjointing fowl, separating meat from bone, dicing raw meats, coring lettuce

SLICER
10- to 16-inch carbon or stainless steel blade, which may be serrated; wooden or plastic handle
Hint for Using: When slicing meat, use back-and-forth sawing motion.

Slicing tomatoes, lettuce wedges; slicing roast or ham; cutting cakes or sandwiches

BREAD
9-inch blade with serrated edge
Hint for Using: Hold bread or cake lightly and use a sawing motion with the knife.

Slicing bread or cake



CLEAVER
7-inch heavy, thick oblong blade

Splitting heavy bones and joints, cutting chickens into serving portions; opening lobsters.

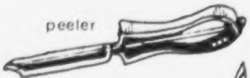
Knives which are kept sharp are both easier and safer to use. Less pressure is required when the knife is sharp, and there is less danger that the knife will slip. A ***Carborundum stone*** is used to sharpen knives. A ***sharpening steel*** is used to ***true*** or ***deburr*** (to smooth the cutting edge of a knife that is sharp) knives. The steel may be flat, cylindrical, or oval and may have a steel shaft.

Hard rubber or plastic ***cutting boards*** are used in food service establishments. These boards are more sanitary than wooden ones. Wooden cutting boards may harbor bacteria which can be transferred to other foods cut on the board.

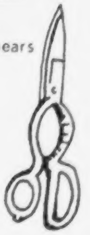
Store knives in slotted wood or rubber racks. The racks should be mounted on the wall in an accessible place. Never store knives in drawers.

Other Cutting Devices

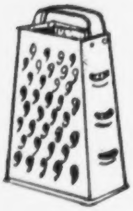
A variety of other cutting devices are used in food preparation. One of the most useful is a 6-inch floating blade ***peeler***. A peeler may be used for peeling and for slicing thin strips of fruits and vegetables. It may also be used for removing the core from fruits and vegetables. A ***grater*** is used to grate, shred, slice, and serrate foods such as carrots, cabbage, and cheese. It may be either square or flat with different shapes and sizes of slots or grids. ***Utility shears*** are used for snipping parsley, cutting garnishes, and trimming pastry and many other kitchen tasks. Specialized cutters and slicers include cheese cutters, egg slicers, butter cutters, tomato slicers, potato cutters, and ballers. Also included are biscuit, doughnut, cookie and other cutters used in baking.



peeler



utility shears

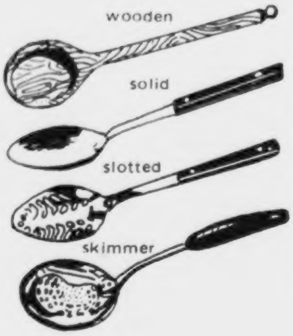


grater

FOOD HANDLING

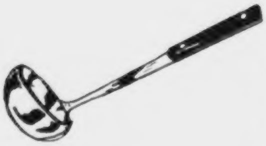
Tools used for handling food include spoons, ladles, scoops, spatulas, tongs, and forks. These tools are used for stirring, lifting, and turning food during preparation. They are also used for portioning and serving food.

Spoons, Skimmers, and Paddles



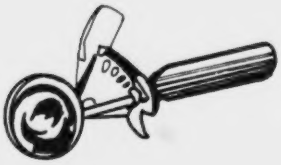
Spoons may be made of wood, stainless steel, or plastic. They may be solid, slotted, or pierced. ***Wooden spoons*** are used for stirring, mixing, creaming, tossing, folding, and serving. ***Solid spoons*** are used to lift foods, including the liquid, out of the pot. They are also used to spoon liquids over foods. ***Slotted*** or ***perforated spoons*** are used to lift foods out of the liquid in which they were cooked. ***Skimmers*** are used to remove scum, grease, or other items from the top of stocks, gravies, and other liquids. They are also used to lift food out of hot liquid. Long-handled wooden or metal ***paddles*** are used to stir food in deep pots and steam kettles.

Ladles



Ladles are used for transferring foods from one container to another. They are often used for lifting soups, gravies, and sauces. Ladles are also used for portioning these foods. Ladles are made of stainless steel. They come in a variety of sizes from 1/2-ounce to 32 ounces to aid in portioning various foods.

Scoops

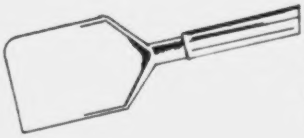


A ***scoop*** is a metal half-balled shaped cup with a movable strip on the inside of the cup. The strip is operated by a clip on the side of the handle. The strip scrapes the food out of the cup when the clip is pressed. Scoops are used to fill muffin cups or drop cookie dough on baking sheets. Some deep-fried foods are also portioned with scoops.

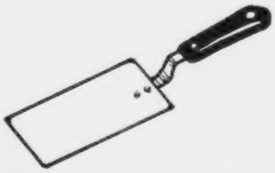
Scoops also measure serving portions. Numbers are used to indicate different scoop sizes. The larger the number, the smaller the scoop. The table below gives common scoop sizes.

Scoop	Weight		Measure	
Number	Metric	Customary	Metric	Customary
8	142 g	4-5 oz	125 mL	1/2 c
10	113 g	3-4 oz	100 mL	2/5 c
12	85 g	2½-3 oz	83 mL	1/3 c
16	57 g	2 oz	62 mL	1/4 c
20	47 g	1 3/4 oz	48 mL	3 1/5 T
24	43 g	1 1/2 oz	40 mL	2 2/3 T
30	35 g	1 1/4 oz	33 mL	2 1/5 T

Spatulas

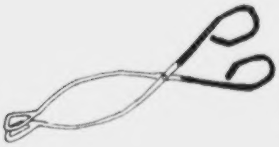


Spatulas are actually flexible blade knives. Their blades are dull and have a rounded tip. Spatulas are used to level off ingredients when measuring. They are used to remove food from flat pans. They are also used for spreading frostings, sandwich fillings, butter, salad dressing, and other soft foods. Several spatulas commonly used in food preparation are narrow spatulas, wide spatulas, pie knives, and sandwich spreaders. ***Plastic*** or ***rubber spatulas*** are used for scraping bowls.



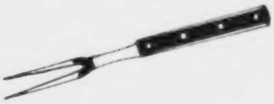
Larger ***offset spatulas*** or ***turners*** are used to turn meat, pancakes, potatoes, and other foods while browning. The offset or bend keeps the hand away from the hot surface. The turner's blade may be solid or perforated. Turners can also be used as a scraper to remove grease and other materials. They are made of stainless steel or plastic and have a thin flexible blade.

Tongs



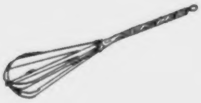
Tongs are used for both preparing and serving food. They are used to turn meat while broiling and to lift vegetables like corn-on-the-cob from a steamer or hot liquid. They are also used to serve food without touching it with the hands. Ice tongs are used for serving ice cubes.

Forks



Two-tine or ***cook's forks*** are used for turning meat while browning or cooking. Forks are also used to hold meat and other foods while they are sliced.

BEATING AND WHIPPING

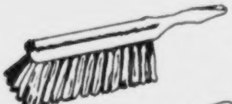


Rotary beaters are used for beating small quantities of eggs or batter. ***Wire whips*** or ***whisks*** are used for whipping and blending. They are used for whipping egg whites, cream, and batter and for blending gravies, sauces, and soups.

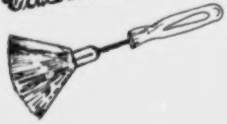
BRUSHING

Many kinds of brushes are used in food service operations. Brushes are used for spreading ingredients, removing substances from surfaces, and cleaning food, utensils, and equipment.

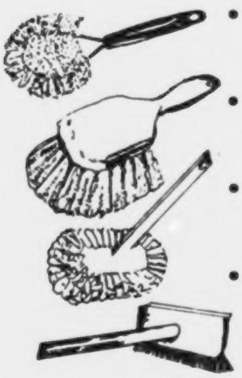
- ***Pastry brushes*** are used for spreading melted butter or thin mixtures like icings or egg and water. They have soft bristles.



- ***Bench brushes*** are used for brushing away excess flour. They have long, soft bristles.

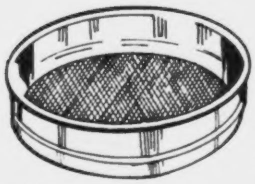


- ***Grease brushes*** are used for removing grease from soups, stocks, and sauces. They have special bristles for attracting grease.



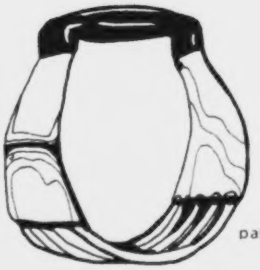
- ***Vegetable brushes*** are used for cleaning vegetables and fruits. They have stiff bristles.
- ***Pot brushes*** are used for cleaning food from pots and pans. They have metal bristles.
- ***Kettle brushes*** are used for cleaning deep kettles. They have stiff bristles and a long handle.
- ***Oven brushes*** are used for removing crumbs from the oven floor. They have soft bristles and a long handle. They may have a scraper opposite the brush.

BAKING

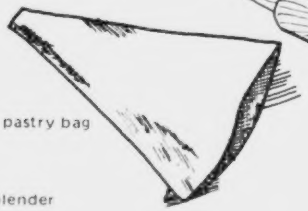


sifter

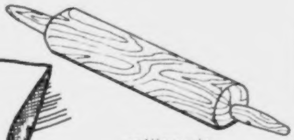
Several specialized tools are used in preparing baked products. A ***sifter*** is used to sift flour or powdered sugar, and to blend dry ingredients. A ***pastry blender*** is used to cut shortening into flour. A ***rolling pin*** is used to roll out pastry, rolls, and cookies. A ***dough scraper*** is used to scrape the dough from the board. ***Pastry bags*** are used to make shaped pastries and decorations. The bag is used with a variety of tips or tubes designed to create different shapes when a soft food like icing is squeeezed through. A ***pastry wheel*** is used for cutting pastry. An ***edger*** or ***crimper*** is used for making a decorative edge on pie crusts and pastries.



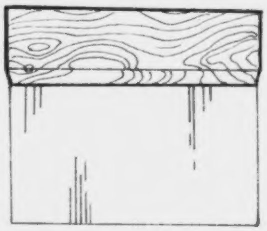
pastry blender



pastry bag



rolling pin



dough scraper

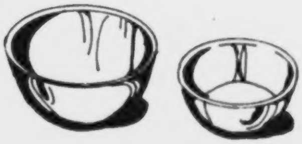
Utensils

Utensils are containers used to hold food. Utensils include bowls, pots and pans, pitchers, and a variety of other containers.

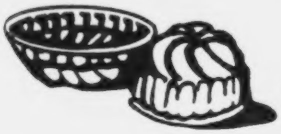
STORING

Bins are used for storing large amounts of staples in food service operations. They are usually on casters for easy moving. Heavy plastic ***storage containers*** with snap-on covers are used to keep food from drying out.

MIXING AND MOLDING

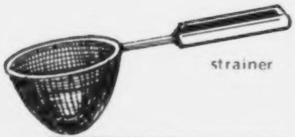


Bowls are used for mixing and combining ingredients. Bowls may be assorted sizes and shapes. In food service operations, the bowls are made of stainless steel because they do not break.

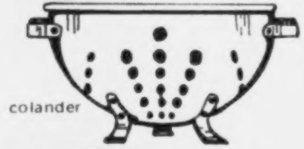


Molds in a variety of shapes are used for gelatins and desserts. Molds may be made of copper, aluminum, glass, or earthenware. Almost all foods shaped in molds are served cold.

SHAKING AND STRAINING

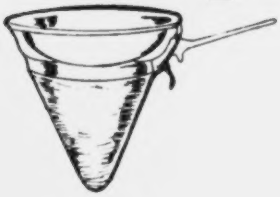


strainer



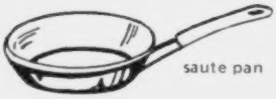
colander

Some containers used in food service have holes through which food is shaken or which separate solids from liquid. A ***salt shaker*** is a common example of a shaker. Mesh ***strainers*** in a variety of sizes and shapes are used for separating solids and liquid. The mesh varies from fine to coarse. A ***sieve*** has similar uses, but is a stainless steel perforated cup with a handle. A ***colander*** is a perforated stainless-steel bowl with feet or a base and handles for lifting. It is used to drain cooked foods like pasta and to rinse salad greens and berries.

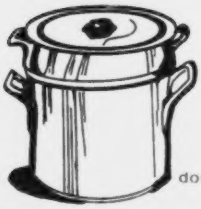


A ***China cap*** is a perforated cone-shaped bowl with a long handle and a hook for hanging it on the side of a pot. It is used for straining liquids from solids when making soups and gravies. It is also used to puree foods. A pointed wooden mallet is used to force the food through the strainer.

COOKING

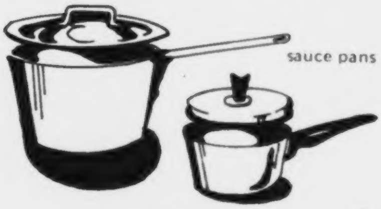


saute pan

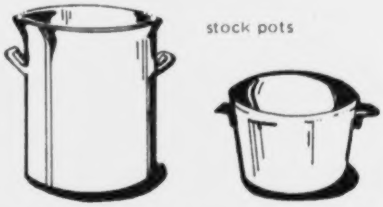


double boiler

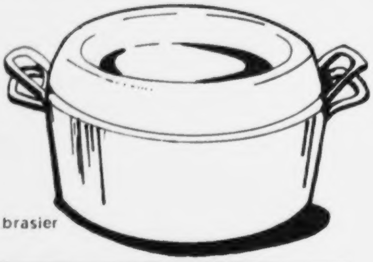
Frying pans, skillets, or ***saute pans*** are used for cooking foods in a small amount of fat. ***Saucepans*** are used for cooking small amounts of sauces, vegetables, or other foods. Saucepans have straight sides, long handles, and covers. ***Stock pots*** are used for cooking larger amounts of food like soup, chili, spaghetti, or corn-on-the-cob. They have deep, straight sides, a handle on each side, and a cover. A ***double boiler*** is used for foods which must be kept below the boiling point, such as puddings and sauces. A double boiler is also used to keep foods warm without overcooking. It has two sections, the lower one for water, the upper one for the food. It is used with a cover. A ***brasier*** is a large covered utensil used for braising meats and poultry.



sauce pans

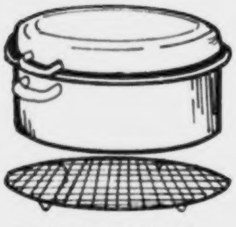


stock pots



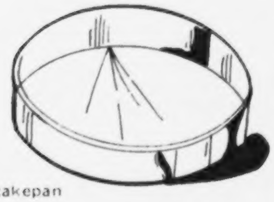
brasier

BAKING AND ROASTING



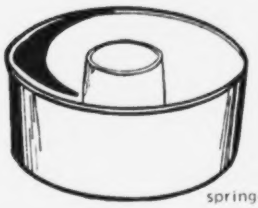
roasting pan and rack

A variety of pans are used for baking and roasting. ***Baking pans*** are shallow, rectangular pans. They are used for foods like macaroni and cheese, roasted meats, cakes, and gelatin salads. ***Roasting pans*** are rectangular pans with deep sides used for roasting meat, poultry, and fish. A ***trivet*** or ***roasting rack*** is usually placed on the bottom to hold the meat out of the juices. Roasting pans usually have a deep cover. ***Pizza pans*** are shallow round pans used for baking pizza.

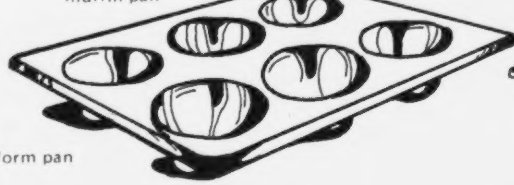


cakepan

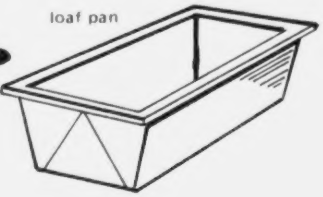
Cake pans may be round or square. Round pans are used for layer cakes. Square ones are used for coffee cakes or one-layer cakes. ***Spring-form pans*** come with or without a center tube. The latch on the side of the pan is opened after baking for easy removal of the cake. A similar pan with a removable tube is often used for angel food cakes. Rectangular ***baking sheets*** are used for baking cookies, rolls, and biscuits. ***Loaf pans*** are used for baking loaves of bread. ***Muffin pans*** are used for baking corn muffins, rolls, and breakfast muffins.



spring-form pan



muffin pan

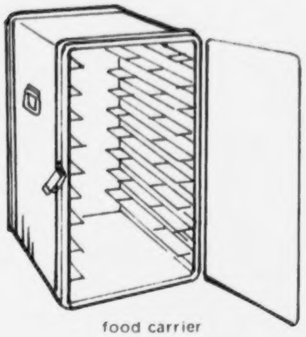


loaf pan

Equipment for Transporting Food and Supplies

A variety of small equipment is needed for transporting and serving food and beverages. Maintaining quality, safety, sanitation, and appearance are the major objectives involved in transporting food.

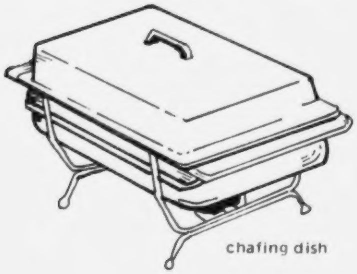
The type food service system determines what type of equipment is needed to transport food from one location to another. Food carts and carriers are essential for the safe transportation of food.



food carrier

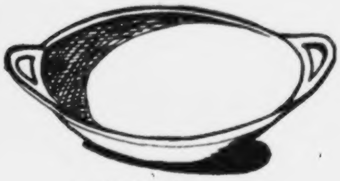
TO AND FROM DINING AREA

Carts are useful for moving items to and from the dining area in a restaurant or cafeteria. The ***bussing cart*** is used for storing and bussing items in the dining area. The ***service wagon*** is used for cooking near the table or keeping foods warm in the dining area. The ***dessert*** or ***pastry cart*** is used for displaying these items to customers at their tables. ***Food carriers*** are used for transporting foods within a large establishment like a hotel or to another site.



chafing dish

Large establishments must sometimes keep foods or beverages hot for a period of time. Containers called ***food warmers*** are used to keep foods warm. The ***samovar*** dispenses hot liquids such as coffee or tea. ***Chafing dishes*** are often used on buffets. A chafing dish is a pan for preparing or keeping foods hot at the table. A portable or canned heat source, sometimes called a ***rechaud*** (ruh SHOW) ***lamp***, is usually used under, the chafing dish to keep it warm. A steam pan heated by an electric calrod unit or lighted wicks in a flammable alcohol may supply the heat for some chafing dishes.

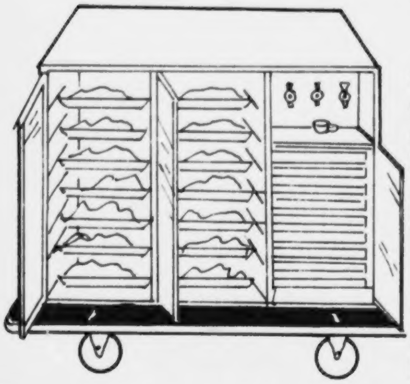


au gratin dish

Various other utensils are used for serving. ***Pitchers*** are used for both hot and cold liquids. Common ones include a coffee server, a water or juice pitcher, and a gravy boat. Large serving dishes are used for buffets or large groups. Individual table items include salt and pepper shakers, containers for sugar and sweetner, cream pitchers, and bread baskets.

Main dishes are sometimes cooked and served in the same container. Casseroles or egg dishes may be served in an ***au gratin dish***. A ***sizzle platter***, a platter with a preheated removable liner, may be used to serve hot foods like steak or Mexican food.

IN HOSPITALS AND NURSING HOMES

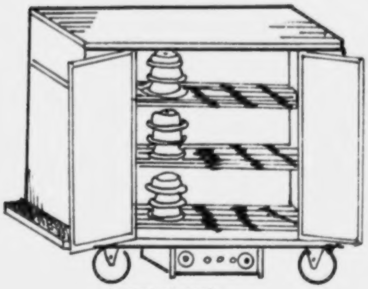


combination hot and cold cart

Hospitals and nursing homes often use carts that are equipped with temperature-control devices. ***Combination hot and cold carts*** are loaded with the correct number of served trays and then transported. The carts are delivered to each floor or wing of the facility. The cart is plugged in to maintain correct temperatures while the trays are served from the cart to the patients. The cart may also have a container with a spigot for serving beverages or soups.

Bulk food carts are used to move larger amounts of food from a central kitchen to another location where the food is served. These carts are used in some hospitals where trays are made up in floor kitchens and delivered to patients.

TO CATERING SITE



banquet cart

Banquet carts may be used by caterers and large hotels and motels to transport served plates to the location of the banquet. Plates are covered with domed covers and stacked on shelves in the cart. Bakers may place baked products on trays in a tall bakery cart for transporting.

Equipment such as glassware, dishes, cooking utensils, and flatware may be transported in carrying cases. Heavy cardboard or wooden boxes with dividers may be used for packing glassware. Heavy cardboard boxes may also be used for packing flatware, kitchen utensils, and other non-breakable items such as linens and paper goods. Some dishes may need to be wrapped in cloth before being placed in carrying cases.

Points To Remember

- Tools are hand-held equipment, while utensils are containers for holding food.
- Measuring cups and spoons are used for measuring liquid and dry ingredients which are not weighed. Both the appropriate container and the appropriate measuring technique must be used to ensure accuracy.
- Thermometers are used in food service to measure the temperature of food, fat, or air. The types of thermometers include confection-

ary, meat, fat, and dial-type. The accuracy of oven, refrigerator, freezer, and deep fryer thermostats should be checked regularly with a thermometer.

- Knives commonly used in food service include French knives, paring knives, butcher knives, boning knives, slicers, bread knives, and cleavers. A Carborundum stone is used for shaprening knives. A sharpening steel is used to true or deburr knives. A hard rubber or plastic cutting board is used for sanitary reasons. For safety, knives should be stored in racks.
- Other cutting devices used in food service include peelers, graters, utility scissors, and a variety of specialized cutters and slicers.
- Tools for handling food include spoons, ladles, scoops, spatulas, tongs, and forks.
- Small equipment used for beating and whipping food includes rotary beaters and wire whips or whisks.
- Many kinds of brushes are used in food service operations including pastry brushes, bench brushes, grease brushes, vegetable brushes, pot brushes, kettle brushes, and oven brushes.
- Several specialized tools used in preparing baked products are sifter, pastry blender, rolling pin, dough scraper, pastry bags, pastry wheel, and edger.
- Bins and other storage containers are used for food storage.
- Bowls are used for mixing and combining ingredients, while molds are used for shaping gelatins and desserts.
- Containers for shaking and straining include shakers, strainers, sieves, colanders, and China caps.
- Foods are cooked on top of the range in pots and pans. Common ones include frying pans, skillets, saute pans, saucepans, stock pots, double boilers, and brasiers.
- Pans for baking and roasting include bake pans, roasting pans, pizza pans, cake pans, baking sheets, loaf pans, and muffin pans.
- Small equipment for transporting and serving food and beverages include carts and trays, hot-holding equipment, pitchers, large serving dishes, and individual table items.

Words To Know

au gratin dish
baking pan
baking sheet
banquet cart
pastry cart
pastry wheel
peeler
perforated spoon

bench brush
bins
bowls
brasier
bulk food cart
bussing cart
cake pan
Carborundum stone
chafing dish
China cap
colander
combination hot and cold carts
confectionary thermometer
cook's fork
crimper
cutlery
cutting board
deburr
dessert cart
dial-type thermometer
double boiler
dough scraper
dry measuring cups
edger
fat thermometer
food carrier
food warmer
frying pan
grater
grease brush
kettle brush
ladle
liquid measuring container
loaf pan
measuring spoons
meat thermometer
molds
muffin pan
offset spatula
oven brush
paddle
pastry bag
pastry blender
pastry brush
pitcher
pizza pan
plastic spatula
pot brush
rechaud lamp
roasting pan
roasting rack
rolling pin
rotary beater
rubber spatula
salt shaker
samovar
saucepan
saute pan
scoop
service wagon
sharpening steel
sieve
sifter
sizzle platter
skillet
skimmer
slotted spoon
solid spoon
spatula
spring-form pan
stock pot
storage containers
strainer
thermometer
thermostat
tools
tongs
trivet
true
turner
two-tine fork
utensils
utility shears
vegetable brush
whisk
wire whip
wooden spoon

Questions For Review

1. How are tools and utensils different?
2. Why should standard measures be used in food preparation?
3. Describe the procedure used to level dry ingredients.

[redacted]

4. Why is it recommended that glass measuring cups not be used in food service establishments?

5. Why should brown sugar be packed firmly when measuring?

6. How would you measure 1/8 teaspoon of an ingredient without using a spoon of that size?

7. Why is flour sifted before measuring?

8. What type thermometer is used to measure the temperature of each of following?
   a. frosting or candy
   b. meat
   c. fat
   d. air

9. Name the seven knives most often used in food preparation and and common uses for each.

10. What tools are used for sharpening and deburring knives?

11. Where should knives be stored?

12. In addition to knives, what other cutting devices are used in food preparation?

13. Name five tools used for handling food.

14. Why do ladles and scoops come in a variety of sizes?

15. What are five types and uses of brushes in food service operations?

16. What are five specialized tools used in baking?

17. Name five utensils used for each of the following:
    a. shaking and straining
    b. cooking
    c. baking and roasting

18. What types of small equipment are used for transporting and serving food in restaurants and cafeterias?

19. What types of equipment are used to transport food and supplies to another location?

10

Chapter Ten
Food Preparation Equipment

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.

OBJECTIVES TO ACHIEVE

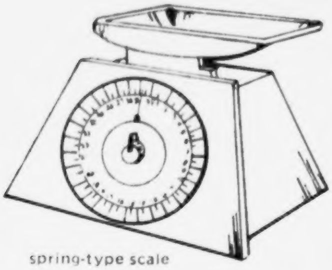
- Identify equipment used in food preparation.
- Outline uses of food preparation equipment.
- Summarize care procedures for food preparation equipment.

A variety of equipment is used in food preparation. Equipment is needed for weighing ingredients, opening cans, cutting foods, mixing foods, making and dispensing beverages, and cooking food. The equipment used will depend on the type and volume of food service. For example, fast food establishments may have specialized equipment designed for preparing and serving menu items quickly and efficiently.

Scales

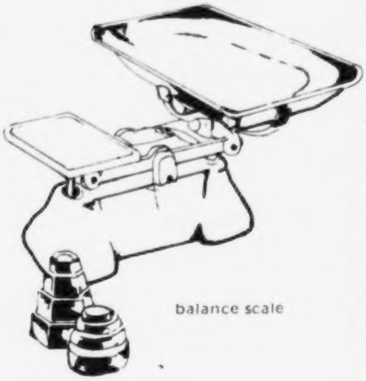
Scales and ***balances*** are used in quantity food preparation to save time and assure accuracy. Because ingredients are not all the same weight, it is not always correct to say that 2 cups of an ingredient equal 1 pound. When the amounts in a recipe are expressed in ounces or pounds, it is important that ingredients be weighed instead of measured.

Several acceptable types or models of scales and balances are used in food service. These include (1) the spring-type model, which is used for weighing dry ingredients such as beans, macaroni, rice, cheese, fruits, and vegetables; (2) the gravity-activated type, called the balance scale, which is used for weighing batters and mixes; (3) the portion scale, which is used for weighing portions of food and rolls; (4) the baker's scale, which is used for weighing ingredients or for scaling dough. For instance, dough for a loaf of bread is weighed for uniform-sized loaves.



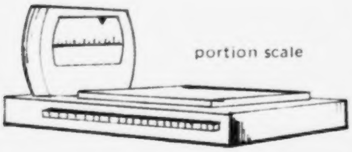
spring-type scale

To operate the ***spring-type scale***, place the product to be weighed on the platform. The rotating dial needle indicates the weight of the product. The dial on the front of the scale is graduated from ounces to pounds. A floor model spring-type scale is often used in the receiving room to weigh incoming food and supplies. A similar model might be used in the kitchen to weight large amounts of food, such as dry beans. For convenience, the floor model platform scale is usually on wheels.



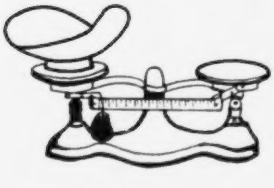
balance scale

To operate the ***balance scale***, remove all weights from the right-hand platter. Remove the scale pan from the left-hand platter. Place the weight indicator into the zero notch. Platters should come to rest in a position level and opposite to each other. (When scales are in a balanced position, touching either platter should cause both platters to move in an up-and-down motion before again coming to rest in the balanced position.) Select weights appropriate for the measurement and place them on the right-hand platter. Place the weight indicator in the proper notch. Placing the weight on the scales will cause the right-hand platter to swing downward and rest on the frame of the scales. Place the food item on the the left-hand platter in an amount just sufficient to bring scales into a balance position. (The item to be measured can be added in relatively large amounts until the scales begin to swing into a balanced position. Smaller amounts should be added until the exact balanced position is accomplished.)



portion scale

To operate the ***portion scale***, place the weight indicator in the groove along the scaled beam for the desired portion size. Place the product on the scaled tray. Check the weight arrow to see if the portion needs to be increased or decreased.



baker's scale

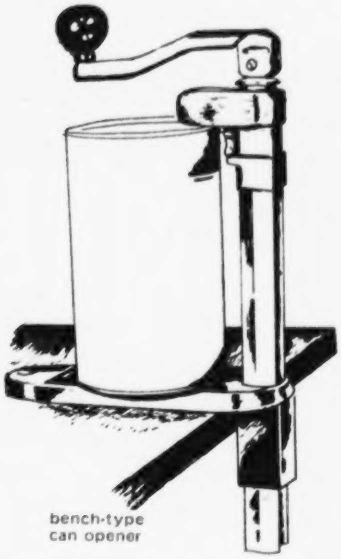
To operate the ***baker's scale***, place the weight indicator at zero on the scaled brass beam, which indicates ounces up to one pound. Center the scoop on the left-hand platform. Weights are used to balance the two platforms. Balance the scoop by placing the proper weight on the right-hand platform. Move the weight indicator on the brass beam to the right until the desired weight is found. The ingredients to be weighed are placed in the scoop on the left-hand platform. If necessary, add or remove a portion of the ingredients to make the platforms balance. When the weighing procedure has been completed, remove the ingredients or food items being weighed and return the scales to a balanced position.

Scales and other equipment used for weighing must be kept clean. This may be done by wiping the scale with a damp cloth after weighing each ingredient. At the end of the day, weighing equipment should be checked to see that ingredients have not accumulated on it. Wash the scale with detergent water and a clean cloth. Let the scales air dry.

Can Openers

The commercial can opener or cutter is designed to remove lids from cans ranging from small through institutional sizes. When properly used, the can opener can save time and energy.

BENCH-TYPE MANUAL CAN OPENER


bench-type can opener

Prior to opening a can of food, wipe the top with a damp cloth. To operate the ***bench-type manual can opener,*** lift the handle to a vertical position until the cutting blade is about one inch above the can. Place the can on the base and with a quick downward motion, force the blade into the top near the edge. Lower the handle to a horizontal position. To open the can, turn the handle clockwise until the blade cuts out the lid. Remove the lid before it falls into the can. Raise the handle to a vertical position.

Lower the shank into the base of the can opener. Wipe the blade of the can opener with a damp cloth after each operation. Food deposits that remain on a can opener not only cause bacterial contamination and off-flavors and odors in food but also may interfere with the operation of the can opener.

Clean the opener daily. Remove the opener by lifting the shank out of the base. Wash the shank in a hot detergent solution and scrub with a brush. Rinse the shank under hot running water and dry. Wash the blade with a sanitizing solution and inspect it for nicks and grooves which may cause metal shavings to drop into food. Following manufacturer's instructions, replace the old or badly worn blade with a new one. Keep the can opener in good repair so that it cuts sharply and leaves no ragged edges. To clean the base, wipe it off with a hot damp cloth. Give careful attention to the edge of the base.

For monthly cleaning of the can opener, clean and inspect the blade following the instructions for daily cleaning. Remove screws and the base. Scrub the blade using a hot detergent solution; rinse and dry. Clean the table under the can opener by scrubbing with a hot detergent solution; use a scraper if necessary. Rinse and dry the table. Apply a very thin film of rust preventive (cooking oil) to the shank and bottom of base. To reassemble the can opener, screw the base back in place and replace the shank.

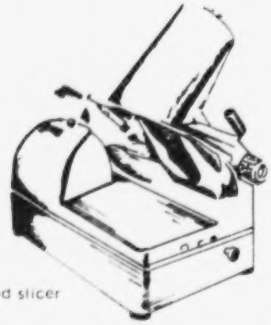
ELECTRIC CAN OPENER

Many food service operators now use ***electric can openers.*** They operate on the same principle as manual can openers. To operate the electric can opener, place the can against the opener with the protruding edge of the can on the cutting wheel. Pushing the start button or lever will start the motor, puncture the can, and rotate the can against the cutter.

The can opener blades should always be wiped clean with a damp, sudsy cloth. Most cutter wheel assemblies may be removed for cleaning but check manufacturer's directions first.

Cutting Equipment

The cutting equipment used in food preparation includes the food slicer, the vertical food cutter or chopper, the food processor, and the vegetable peeler. When using cutting equipment, food service employees should know and follow safety precautions.



food slicer

FOOD SLICER

The ***food slicer*** is used for slicing boneless meats and cheese. Fruits, vegetables, and bread may also be sliced by the food slicer. The food slicer can be used for cutting hot or cold foods.

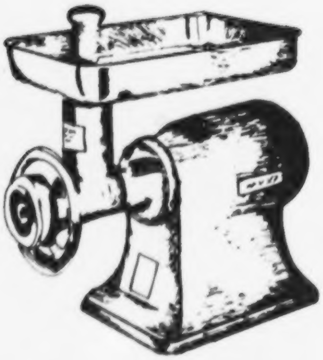
To use the food slicer, first plug it in. Adjust the blade control indicator for the desired thickness of slice. Place the food in the food carriage. Hold the food firmly in place using the food holder. Turn the switch on. Then, using the handle, move the carriage back and forth across the blade using a rhythmic motion.

SAFETY PRECAUTIONS

- Always make certain the switch is off and the plug pulled out of the socket before cleaning the slicer.
- Read and follow the manufacturer's instructions carefully.
- Never use the slicer when the blade guard is off.
- Always keep hands away from blade when the machine is in operation.
- Leave unplugged when not in use.
- Never use a metal instrument to scrape food particles from slicer knife. A nicked blade tears food.
- Do not use very hot water or steam when cleaning the slicer. Too much heat may dry lubricants in important parts.
- Keep blades sharpened according to manufacturer's instructions.

Clean the food slicer daily with a sanitizing solution. Before cleaning, remove the electrical cord from the socket, set the blade control indicator at zero, and remove parts following manufacturer's instructions. Wipe gauge plate with hot detergent solution, then rinse and dry. *Note: Keep clear of blade edge.* Wipe entire blade with heavy cloth, folded and dampened with hot detergent solution. Wrap cloth around long-handled hook, if provided. Wipe from center toward edges of blade. Rinse and dry blade with clean, heavy cloth. Wash blade guard in hot detergent solution, rinse, and dry. *Note: Replace blade guard immediately to prevent injury.* Wash other parts in hot detergent solution, rinse, and dry. Wash all surfaces with hot detergent solution. Clean under blades with damp cloth. Push cloth under blade, using long-handled hook, if provided. Rinse and dry. Clean area under slicer. Replace parts following manufacturer's instructions. Cover with plastic or clean towel.

FOOD CUTTER OR CHOPPER



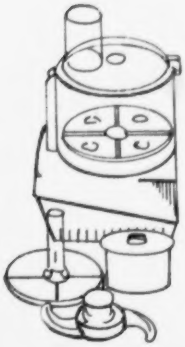
Before using a vertical ***food cutter*** or ***chopper***, read and follow the manufacturer's instructions carefully. Be sure the machine is completely assembled with all parts securely in place. Start the machine, then feed food into the bowl gradually. Before removing the food, turn the machine off and *wait* for the knives to stop rotating. Throw the safety catch and remove the food from the exposed part of the bowl. Then raise the guard and remove the remaining food.

To prepare the food cutter or chopper for the next operation, hold the knives to prevent rotation and wipe the blades cautiously. Wipe out the bowl. Rinse the knife guard, dry, and replace. Reassemble according to manufacturer's instructions.

SAFETY PRECAUTIONS

- Never put hands in bowl while cutter is in use.
- Wait until the knives have stopped revolving before removing food or cleaning.
- Use a bowl scraper rather than hands to feed food into cutters; move the bowl scraper in direction opposite to bowl rotation.
- Do not use cutter for cutting meat with bones or gristle, to prevent damage to knives and gears.
- After cleaning cutter, make sure knives are replaced in proper position.

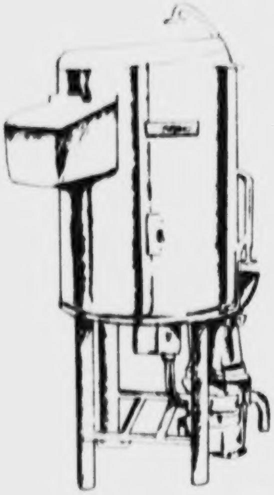
Clean the food cutter or chopper daily following the manufacturer's directions carefully. Remove and wash the guard, bowl, and any other removable parts in a hot detergent solution, rinse and dry. Replace all parts, bowl, and guard.



FOOD PROCESSOR

A ***food processor*** accomplishes the task of a food cutter or chopper in addition to other tasks usually done with knives, graters, mixers, etc. The operation and cleaning of the food processor is similar to that of the food cutter or chopper. Always follow the directions of the manufacturer.

When operating the food processor, remember that the blades are sharp. To avoid injury, never place cutting blade or disc on the base without first having the bowl in place. Keep your hands and utensils away from the moving blades. Use the food ***pusher***, never your hands, to feed food when shredding or slicing. Always operate the processor with the cover in place. When finished, turn the processor off and wait until the blades stop before opening. Unplug the processor before taking off or putting on parts, before cleaning, or while not in use. *Never* immerse the base in water. Wash all other parts in hot detergent solution. Use only attachments recommended by the manufacturer.



VEGETABLE PEELER

Vegetable peelers remove the skin from potatoes and other vegetables. They work by rotating the vegetables against an abrasive surface. Some of the larger units are plumbed with cold tap water. Clean the vegetable peeler daily with a sanitizing solution. Vegetable peelers are not as common as they were in the past. Many establishments now purchase peeled, sliced, shredded, or semi-prepared vegetables.

OTHER CUTTING EQUIPMENT

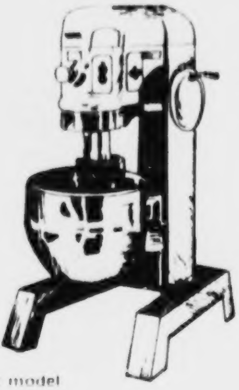
Various other types of cutting equipment are used in food service. Among these are speciality cutters and shredders for salad making and hand or power saws for cutting meat carcasses.

Mixing Equipment

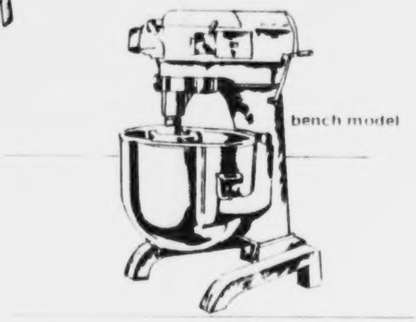
Mixers and blenders are used for mixing foods during their preparation. Food processors are also used for some mixing tasks.

MIXER

Mixers may be either floor models, bench models, or table models. The 30-60 quart ***floor model mixer*** is used for mixing and blending ingredients or for incorporating air into the product. The 12-20 quart ***bench model*** and the 5 quart ***table model*** are used for mixing, creaming, or beating ingredients for cakes, batters, doughs, pastries, or meringues.



floor model



bench model

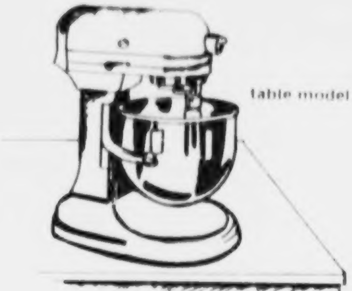
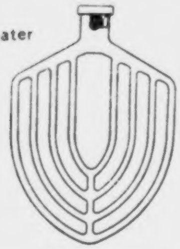
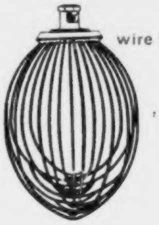
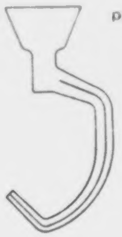


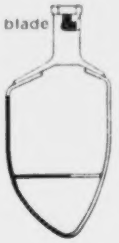
table model

Mixers use a variety of ***beaters*** and ***whips*** or agitators. Each is used for specific purposes. A ***flat beater*** is used for general mixing. It is never used for heavy doughs. A ***wire whip*** is used for incorporating air into light mixtures, never for heavy mixtures. A ***dough hook*** is used for mixing heavy doughs requiring a folding and stretching action. A ***pastry blade*** is used for combining shortening and flour by a cutting action, as for biscuits, pie crust, or shortcake.



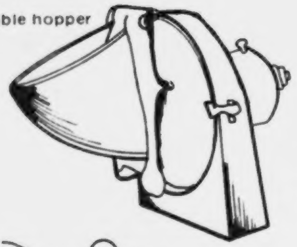




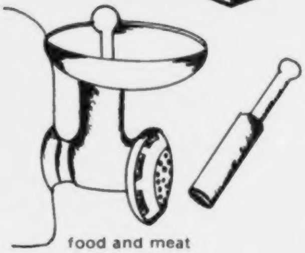


To operate a mixer, select the appropriate bowl size and place it on the bowl support. Fill the bowl 1/2 to 2/3 full. Select the proper beater or whip and insert into beater shaft. Lock into position. Use the lever to raise the bowl to the desired height. Adjust the speed control to low, or place in neutral according to the manufacturer's instructions. For gear-driven machines, always put clutch lever into neutral before changing speeds. Select the desired speed and mix the required length of time. Stop the machine. Lower the bowl. Remove the beater or whip, then remove the bowl.

To clean the food mixer, follow the manufacturer's directions carefully. Immediately after use, clean the bowl support, beater shaft, shell, and base with hot detergent solution. Rinse and dry. Scrape and brush out groove on beater shaft, if necessary. Wash the bowl and beaters immediately after use. Use cold water to rinse before washing if egg or flour batters have been mixed. Rinse, dry, and hang up beater. Rinse and dry bowl thoroughly.



Attachments used with the mixer include the vegetable hopper and the meat and food chopper. The ***vegetable hopper*** is a special attachment for slicing, grating, or shredding vegetables and cheese. The food is placed by a rotor inside the hopper and forced through a plate which cuts the food. The plates used with the vegetable hopper include the slicer plate, the grater plate, and the shredder plate.

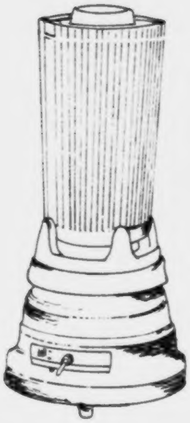


The ***meat and food chopper*** is used for chopping raw or cooked meat, vegetables, and dried fruits. It is used for grinding dry bread crumbs, grating hard cheese, and chopping hard-cooked eggs. A pusher is used to push the food through the chopper.

SAFETY PRECAUTIONS

- Select the correct bowl for the type and amount of mixture and then select the correct beater or whip according to bowl size and mixture.

- Be sure to fasten the bowl and beaters, agitators, or whip securely before starting the motor.
- Prevent spillage by starting the machine at low speed.
- Do not put hands, spoons, or scrapers into bowl while mixer is in operation.
- Always use a rubber scraper or flexible spatula to scrape the sides of the bowl and to remove food from the beater or whip.
- Scrape the sides of the bowl *only* after the agitator has stopped.
- Remove agitators and attachments *only* after the motor has stopped.
- Use a splash cover if bowls are over half full.
- Get help when handling heavy containers or use wheeled equipment.
- Do not wear loose clothing or accessories that may catch on the moving parts of the machine.
- Keep long hair tied back so it cannot become caught in the moving parts of the machine.



BLENDER

Blenders are used for high-speed blending, pulping, or mixing of meat, fish, vegetables, fruits, or beverages. To operate a blender, secure the jar onto the base. Place substances to be blended into the jar. Secure the lid on the jar. Connect the cord. Turn on the switch and select the desired speed. Turn the switch off as soon as ingredients reach the desired consistency.

To clean the blender, remove the jar from the base, wash, rinse, and dry. For hard-to-remove materials, put detergent water into jar and blend briefly before washing. Wipe base with damp cloth after each use, then dry.

SAFETY PRECAUTIONS

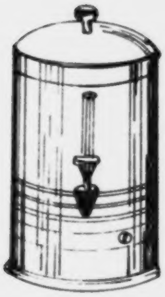
- Do not drop spoons, spatulas, or scrapers into machine while motor is on.
- Be sure lid is fastened tightly.
- Do not put very coarse foods or large pieces of ice into jar.
- Disconnect cord when machine is not in use.

Beverage Equipment

Beverage equipment includes equipment for making and serving coffee, tea, and cold beverages. As with all food preparation equipment, beverage equipment should be kept clean and sanitary.

COFFEE MAKERS

Coffee makers are used for making and serving coffee. Coffee can be served in an electric urn or in an automatic coffee brewer.



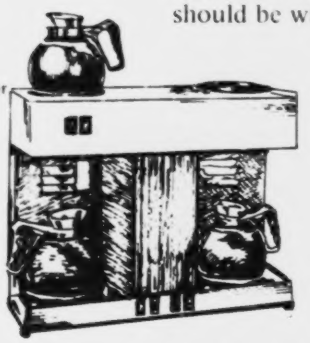
Electric Urn

An ***urn*** is a container with a faucet. The most popular electric urn is fully automatic. It is connected to a source of hot water. A filter basket fits in the top. The coffee is pre-measured and poured into the filter basket. A button is pushed to start the coffee brewing. The hot water drops through the coffee in the basket. When the coffee is brewed, the urn automatically shuts off.

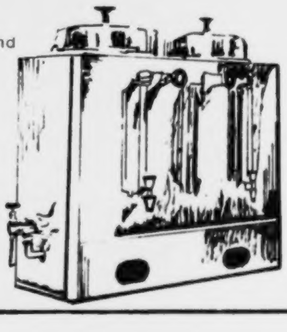
Different brands of urns vary. Always follow the manufacturer's directions for use.

Coffee Brewer

An automatic ***coffee brewer*** is a drip coffee maker. It works much like an urn. Hot water passes through the coffee and filter in the brewing basket. The brewed coffee drips into the serving ***decanter***. When the decanter or server is full, the water automatically shuts off. To make good coffee, coffee makers must be kept clean. Grounds should be emptied from the basket as soon as the coffee is made. All surfaces should be washed daily with a brush and rinsed thoroughly.

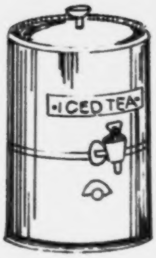


drip coffee maker



coffee brewer and dispenser

TEA DISPENSERS

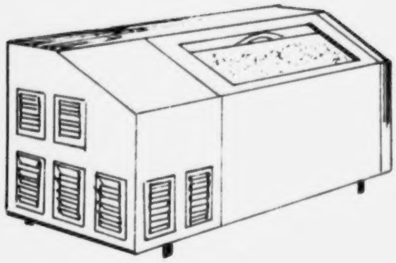


An instant dispenser may be used for iced tea. The ***iced tea dispenser*** combines powdered tea with water. Some dispensers use cold water, others freshly boiled water. Sometimes tea is made in a large container called a ***tea urn***. Like coffee makers, equipment used for making and serving tea must be thoroughly cleaned every day.

COLD BEVERAGE DISPENSING MACHINES

Automatic beverage dispensers are used for milk, soft ice cream, syrups and toppings, fruit juices, soft drinks, and alcoholic beverages. Dispensers used for dairy products must be cleaned daily to prevent bacterial growth. The counter and work area around dispensers must be kept clean and sanitary at all times. Spills should be wiped up immediately.

ICE MAKING MACHINES



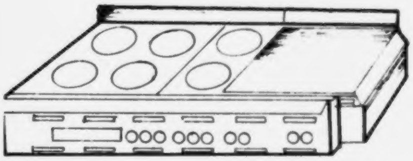
Ice making machines may make cubed, flaked, or chipped ice. Some machines automatically dispense ice into a container. In others, the ice is shredded into a bin and must be removed with a scoop. When not in use the scoop used to remove ice should be stored in a sanitary manner. The ice bin lid should be kept closed. Never place a glass or glass container into the ice bin because it could break or chip in the ice.

The exterior of the ice-making machine should be cleaned daily with a damp cloth, then dried and polished with a soft cloth. The ice maker should be defrosted periodically according to the manufacturer's instructions. Special chemical solutions for cleaning ice machines can be pumped through the ice machine to remove mineral deposits. The inside should then be wiped with a cleaning solution, rinsed, and air-dried.

Cooking Equipment

Surface cooking equipment includes the range top, the grill, the broiler, the deep fat fryer, and the exhaust hood. Other types of cooking equipment include steaming equipment, baking and roasting equipment, and toasters.

RANGE TOP

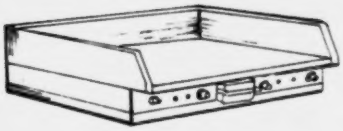


The ***range top*** is used for surface cooking. It is used for browning meats, cooking in small amounts of fat, boiling, or cooking in a double boiler. It may also be used for steaming, frying, and braising if more specialized equipment is not available. It may be gas or electric. It may have individual burners or a solid cook top. The number and sizes of burners vary. The burners are usually equipped with thermostats which control their temperature. Many range tops have an oven underneath.

When using the range top, it is important to select the burner size or flame to fit the size of the pot or pan used. It is also important to select the right amount of heat for the job. High heat is used for quickly starting the cooking process. Medium high heat is used for frying meats. Medium low heat is used for maintaining the cooking temperature after the boiling point is reached and for low-temperature frying. Low heat is used to maintain cooking temperatures below boiling. Simmer is used to keep foods warm, to cook foods slowly for a long time, or to melt foods which scorch easily.

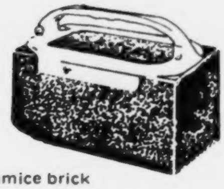
For efficient and sanitary operation, spills should be wiped up immediately. The range top should be cleaned daily after it cools. Burned on food should be removed with a wire brush or scraper. The top, units, sides, and base should be wiped with a hot water and detergent solution, then rinsed and dried. Thorough removal of grease from cracks and drip trays helps prevent fire hazards. Weekly care includes soaking burners or grates in hot detergent solution, rinsing, and drying.

GRILL



A ***grill***, or ***griddle***, is a flat piece of metal with burners underneath. The heat is controlled by a thermostat. It may be either gas or electric. A ventilator draws off smoke and odors quickly. Fat usually drains off at the sides and collects in a drip cup which must be cleaned frequently. Grills are used for breakfast foods like eggs, bacon, sausage, pancakes, and French toast. They are also used for foods like steaks, hamburgers, frankfurters, sandwiches, and potatoes.

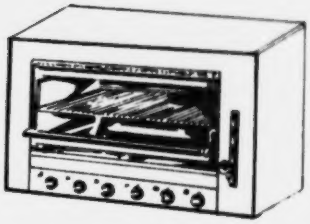
Grills, or griddles, should have a ***splashback*** or raised back, to keep grease from splattering. They should also have grease troughs and rounded corners for easy cleaning.



pumice brick

The surface of the grill is ***seasoned*** with unsalted oil, then heated, to form a slick surface. It is never washed. To clean the grill, allow it to cool, then scrape the surface with a spatula or a stiff metal scraper. Remove stuck food with a ***pumice brick*** which is made of soft volcanic rock. Then wipe with a grease mop and polish with a soft cloth. Filters in the hood above a grill should be washed or changed frequently. The wall, usually made of fire brick, back of a grill should also be washed frequently with a hot detergent solution.

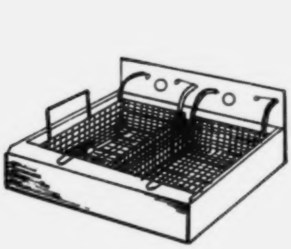
BROILER



A ***broiler*** applies heat directly to food. It is used to prepare meat, fish, and other main dishes. It operates at a higher temperature than a grill. The heat may be applied from underneath, from the top, or from both sides at once. The heat source may be electricity, gas, charcoal, or heated volcanic rock. Temperature control is achieved by raising or lowering the grid. The intense heat sears and browns the outside of the meat while retaining the juices in the meat.

Broilers must be kept very clean to prevent fire hazards. Remove all traces of grease and empty drain cans daily. (Burned on areas can affect the flavors of foods.)

DEEP FAT FRYER



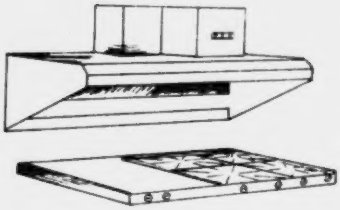
Deep fat fryers are used for frying foods by immersing them in hot deep fat. Cooking a food in deep fat is similar to boiling it. The food is surrounded by the hot, bubbling fat. Menu items which have been fried in deep fat are often called ***French fried***.

Fryers vary in size and may be portable or floor mounted. They may be heated by gas or electricity. A thermostat controls the temperature of the fat to be heated. Most fryers have automatic timers.

Fryers are used for cooking potatoes, batter-cooked meat, poultry, fish, and vegetables, and for fried desserts. For foods cooked in a wire basket, the basket is filled and lowered into the hot fat or oil. Baskets should not be filled more than half full. Foods like chicken, doughnuts, and fried pastries are placed directly in the grease rather than in a basket. Turning is not necessary unless the food floats. Foods like chicken, fried steak, and fish should be turned. When the food is done, it should be lifted out and allowed to drain to remove excess fat.

Fryers and the surrounding area must be kept extremely clean to prevent fires. Before cleaning the deep-fat fryer, turn the unit off and strain the warm fat through the filter. Clean and dry the unit according to manufacturer's directions before refilling with oil or shortening. The taste of food cooked in the deep fat fryer is affected by how clean and fresh the fat is. The fat must be filtered regularly and changed periodically. Fat which is not properly cared for becomes rancid.

EXHAUST HOOD



An ***exhaust hood*** should be placed above range tops, grills, broilers, and deep-fat fryers. The exhaust hood provides ventilation; removes smoke, cooking vapors, and odors from the cooking area; and helps control fires.

To keep the exhaust hood from becoming a fire hazard, it should be cleaned periodically. Use a cloth and warm water and detergent solution to remove grease film. Rinse and dry the hood. Wash grease filters weekly in the dishwashing machine.

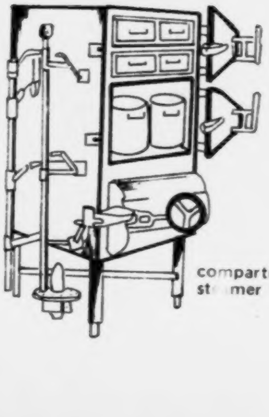
STEAMING EQUIPMENT

Most ***steamers*** use steam under pressure to cook large quantities of food quickly and economically. Steaming preserves the natural flavor and color of food. Steaming also preserves water soluble nutrients.The steam may be generated by gas or electricity.

A ***gauge*** is used to measure the steam pressure in pounds per square inch (psi). As pressure increases the temperature increases. Low pressure (5-10 psi) is used for cooking meats. Higher temperature causes meats to fall apart. High pressure (10-15 psi) is used for cooking vegetables. Short cooking at high temperatures results in colorful vegetables.

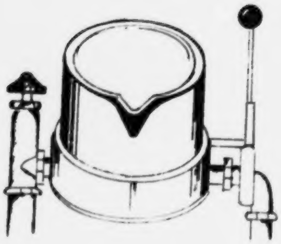
Compartment Steamer

Upright or ***compartment steamers*** consist of several compartments, one above the other. The door to each compartment is equipped with special gaskets and seals to keep the steam inside. The doors are tightly



compartment
steamer

closed by clamps or wheels. Some are completely automatic. They can be set to defrost, then cook the food automatically. The ***convection steamer*** uses a fan to circulate the steam for faster cooking. Vegetables, chicken, and eggs are examples of foods that can be cooked in a compartment steamer.



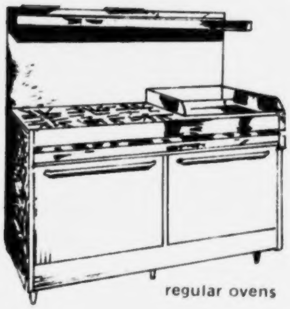
Steam Jacketed Kettle

Steam jacketed kettles of varying sizes are used for cooking foods like soups, stews, stocks, and spaghetti. The steam jacketed kettle is constructed so the steam flows around an inner compartment which holds the food. A tilting mechanism may be used for tilting the kettle and pouring the food.

SAFETY PRECAUTIONS

- Guard against burns when opening steamers. To prevent steam burns, do not attempt to open a pressurized steamer until the pressure has gone down. Then, lift the lid so the steam escapes away from the face.
- Be sure the safety valves are in working order before using.
- Never operate a steamer without water.
- If the steamer overheats or leaks steam, report the problem to your supervisor.

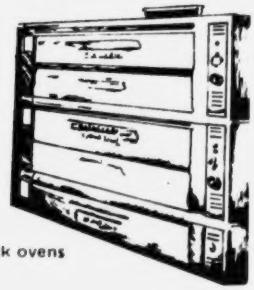
BAKING AND ROASTING EQUIPMENT



regular ovens

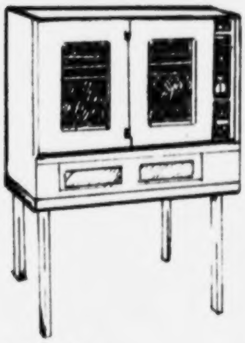
Baking and ***roasting*** are done in ***ovens*** which usually cook food by circulating heated air around it. The two terms refer to the same process even though some foods are called baked, while others are called roasted. Heat is usually provided by electricity or gas. Microwaves and infrared rays are also used. The types of ovens include regular, stack, and convection. Special purpose ovens include revolving or carousel, hearth, pizza ovens, and reconstitution ovens. Newer types of ovens include microwave, impingment, and infrared.

Regular or ***general-purpose ovens*** are usually located under the range top. These ovens usually have two shelves. The oven is controlled by a thermostat. Temperatures are marked in 25-degree intervals from 150°F to 550°F. Some ovens have timers which can be set to turn on and off automatically. Using the correct temperature and time are essential when baking and roasting.



stack ovens

Stack ovens are a series of baking shelves stacked one on the other. Each shelf has a separate door. The temperature of each shelf is controlled by its own thermostat.

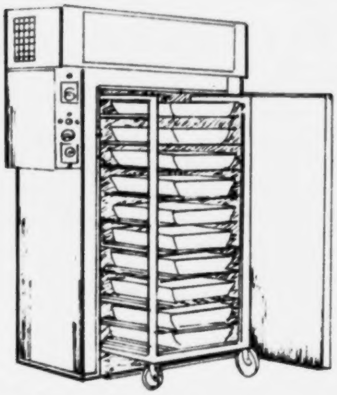


convection oven

Convection ovens use a fan to force hot air through the oven. These ovens bake more quickly than regular ovens. Because the circulating air provides even heat, more baking pans can be placed in the oven than in a conventional oven of the same size. Convection ovens may be used to cook most foods which can be cooked in a conventional oven. Convection ovens are also useful for defrosting and heating frozen foods.

Bakeries frequently use a ***revolving*** or ***carousel oven.*** The trays inside the oven revolve like a ferris wheel. Baking pans are loaded onto each tray as it comes to the long, narrow, oven door. The trays revolve while the products bake, ensuring a constant, even temperature. Some bakeries use ***brick-lined***, or ***hearth ovens. Pizza ovens*** reach a hotter temperature than conventional ovens. They are equipped with a special high-temperature thermostat control up to 700°F.

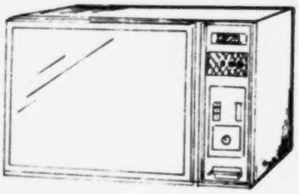
The ***reconstitution oven*** is used for rapid heating, especially of convenience foods. The oven has a combination heat and refrigeration cycle. Frozen foods may be stored either in the unit until reconstituting time or moved to the heating unit from the frozen storage area.



reconstitution oven

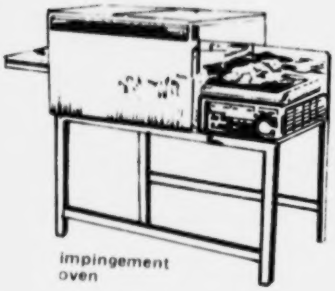
Each day after an oven cools, remove the oven racks and scrape away any burned on food with a metal scraper. Brush away any crumbs or bits of burned on food with a long-handled brush. Wipe the bottom and sides with a clean, damp cloth. Clean the outside of the oven with an all-purpose cleaner. Weekly, after following the daily cleaning routine, take the racks to the pot and pan sink to be scrubbed. Scrub out the oven with a long-handled brush that has been dipped in hot detergent solution. Using a clean damp cloth, rinse out the oven. Replace the oven racks. After cleaning the outside of the oven, dry and polish the metal trim.

For self-cleaning and continuous cleaning ovens follow the manufacturer's instructions. It is possible to harm these ovens through incorrect care.



Microwave ovens cook many foods in much less time than a conventional oven. In food service operations, microwave ovens are used where speed is essential. They are used mostly for defrosting and cooking frozen foods, or for warming pre-cooked foods for service. In microwave ovens, microwaves vibrate the molecules of food at very high speeds. This generates the heat which cooks the food. When the food is removed from the oven, cooking continues for several minutes and should be considered part of the total cooking time. Exact timing is essential when cooking in the microwave oven. Microwave ovens are best used for small amounts of food. Metal pans and metal trimmed dishes cannot be used in microwave ovens. Glass, ceramic, china, paper, and many plastics can be used. Food can be heated and served in the same dish.

Clean up spills in the microwave oven as soon as possible. Wipe the soiled area with a cloth that has been dipped in hot detergent water and then wrung out. Dry the inside of the oven thoroughly. Weekly, clean the outside of the microwave with a cloth that has been dipped in detergent water and wrung out or with an all-purpose cleaner.

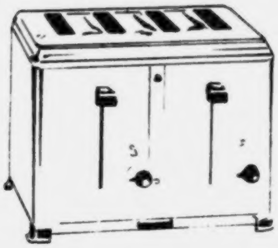

impingement oven

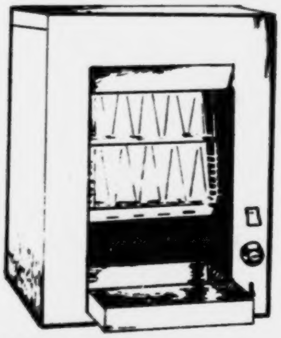
Other new types of ovens include the impingment oven and the infrared oven. The ***impingement oven*** bakes and browns faster than conventional ovens and takes up less space. Some specialty pizza establishments are being equipped with impingement ovens. Inside the baking chamber of the oven are high-velocity hot-air jets above and below the food that *impinge*, or sweep away the cooler air surrounding food surfaces. Both gas and electric impingement ovens are available.

The ***infrared oven*** is heated by the radiant heat of an infrared bulb. The bulb emits a very hot light and a short-wave frequency to generate heat inside the baking chamber. The infrared oven is powered by electricity.

TOASTERS

individual toaster




conveyor toaster

Toasters are used for toasting bread and heating pre-baked items like French toast and waffles. ***Individual toasters*** usually toast one to four slices of bread at a time. The bread slices are put into slots, a brownness control is set, and a lever is pushed down to lower the bread slices and turn on the heating element. The bread pops up automatically when it is toasted to the proper degree of brownness. ***Conveyor toasters*** are used for toasting large amounts (approximately one loaf) of bread at a time. For the conveyor toaster, the bread slices are inserted on a ferris-wheel-like conveyor. When the toaster is turned on the bread slices pass by the heating elements. It shuts off automatically when the bread reaches a pre-set degree of brownness. Toasters should be wiped outside and crumbs removed daily.

As with all equipment, food preparation equipment will need occasional repair. Report all equipment malfunctions, regardless of how minor, to the supervisor. Minor repairs made at the first sign of malfunction may prevent injuries and save the food service establishment costly major repairs at a later date. Each food service establishment will have established procedures for making repairs and/or for contracting for repair work. Your job description should outline your responsibilities for reporting, making, or supervising repairs.

Points To Remember

- Food preparation equipment includes scales, can openers, cutting equipment, mixing equipment, beverage equipment, and cooking equipment.
- Scales and balances used in food service include the spring-type model, the gravity-activated type (balance scale), the portion scale, and the baker's scale.
- Scales and other equipment can be kept clean by wiping the scales with a damp cloth after each weighing and washing thoroughly at the end of the day.
- Commercial can openers include the bench-type manual can opener and the electric can opener.

- Can opener blades should always be clean to prevent bacterial contamination. The can opener should be kept in good repair so that it cuts sharply and leaves no ragged edges.
- Cutting equipment includes the food slicer, food cutter or chopper, food processor, and the vegetable peeler.
- Safety precautions should be observed during use and cleaning of all cutting equipment.
- Mixing equipment includes mixers, food processors, and blenders.
- Floor, bench, and table model mixers use a variety of beaters, whips, and other attachments to mix foods.
- Beverage equipment includes coffee makers, tea dispensers, cold beverage dispensing machines, and ice making machines.
- Beverage dispensers should be cleaned daily and the manufacturer's instructions should be followed for use and care.
- Cooking equipment includes range tops, grills, broilers, deep fat fryers, exhaust hoods, steaming equipment, baking and roasting equipment, and toasters.
- Manufacturers instructions should always be followed when cleaning cooking equipment. Incorrect care could cause damage to the interior surfaces of ovens.

Words To Know

attachment
automatic beverage dispenser
baker's scale
baking
balance scale
balances
beater
bench model mixer
bench-type manual can opener
blender
brick-lined oven
broiler
carousel oven
coffee brewer
compartment steamer
convection oven
convection steamer
conveyor toaster
decanter
deep fat fryer
dough hook
electric can openers
hearth oven
ice making machine
iced tea dispensers
impingement oven
individual toaster
infrared oven
meat and food chopper
microwave oven
oven
pastry blade
pizza oven
portion scale
pumice brick
pusher
range top
reconstitution oven
regular oven
revolving oven
roasting
scales
stack oven
seasoned

exhaust hood
flat beater
floor model mixer
food cutter or chopper
food processor
food slicer
French fried
gauge
general purpose oven
griddle
grill
splashback
spring-type scales
steamer
steam-jacketed kettle
table model mixer
tea urn
urn
vegetable hoppers
vegetable peeler
whip
wire whip

Questions For Review

1. Why should some ingredients be weighed rather than measured?
2. What types of scales are used in food service? How is each used?
3. Describe uses, procedures, and safety precautions for the following types of cutting equipment:
   a. food slicer
   b. food cutter or chopper
   c. food processor
   d. vegetable peeler
4. Describe each of the following parts and attachments for food mixers and their use:
   a. flat beater
   b. wire whip
   c. dough hook
   d. pastry knife
   e. vegetable hopper
   f. meat and food chopper
5. For what food preparation tasks are each of the following used?
   a. food mixer
   b. blender
6. Describe the types of beverage equipment used in food service.
7. Why should beverage dispensers be cleaned daily?
8. What safety and sanitation precautions should be observed when using the ice machine?
9. Describe how to care for each of the following types of cooking equipment:
   a. range top
   b. grill
   c. broiler
   d. deep-fat fryer
   e. steaming equipment
   f. ovens
   g. toasters

10. What safety hazards are associated with using cooking equipment? How can these be avoided?

11. What are the advantages of each of the following types of ovens?
    a. general purpose
    b. stack
    c. convection
    d. revolving
    e. pizza
    f. reconstitution
    g. microwave

11

Chapter Eleven
Cold Storage, Serving, and Cleaning Equipment

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.
- Control and improve sequence of operations.

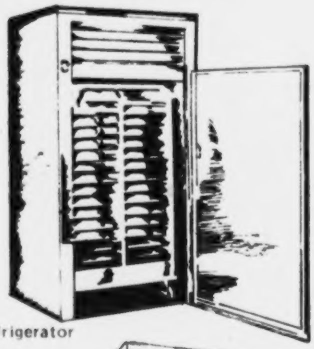
OBJECTIVES TO ACHIEVE

- State procedures for proper use and care of cold storage equipment.
- List appropriate procedures for use and care of holding and serving equipment.
- Describe procedures for use and care of cleaning and disposal equipment.
- Identify work stations and plan the placement of equipment in these stations.

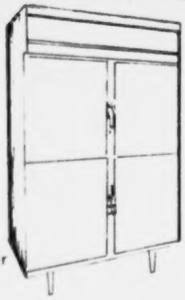
Cold storage equipment, hot and cold serving equipment, and dishwashing equipment are essential for food service sanitation. Cold storage equipment keeps perishable food out of the danger zone until it is ready for preparation or service. Hot and cold serving equipment keeps prepared foods out of the danger zone until they are served. Cleaning equipment cleans and sanitizes dishes, glassware, flatware, and equipment. Sanitizing may be done by heat (thermal) or with a sanitizing solution. Safety and energy conservation factors as well as the type of equipment and utensils being sanitized may influence the choice of which method to use.

Cold Storage Equipment

Cold storage equipment includes refrigerators and freezers. Several different types and sizes are used in food service. The four types of refrigerators and freezers generally used in food service are walk-in,



roll-in refrigerator



reach-in refrigerator

reach-in, roll-in, and pass-through. ***Walk-in refrigerators*** and freezers are small rooms lined with shelves. ***Roll-in refrigerators*** and freezers are small refrigerated rooms into which prepared food on trays can be rolled on carts and kept until serving time. Small ***reach-in refrigerators*** and freezers are usually located at work stations. These may be small refrigerated drawers. ***Pass-through refrigerators*** are placed between the kitchen and serving area. They have doors in front and back. As food is prepared, it is placed in the refrigerator from the kitchen side. As it is needed for service, it is removed from the opposite door.

Foods require different temperatures for cold storage. Raw fruits and vegetables and eggs should be kept cold (40°-45°F). Dairy products should be kept colder (38°-40°F). Meat, poultry, fish, and cooked dishes containing these foods should be kept in the coldest part of the refrigerator (32°-36°F). All foods that are to remain frozen must be kept in a freezer (-10°- 0°F).

REFRIGERATORS

A ***refrigerator*** cools food and keeps it cool. A temperature below 45°F (7.2°C) in the refrigerator helps to prevent spoilage of food. Temperatures vary in different parts of the refrigerator. It is important to know the warmest and coldest parts of the refrigerator so foods can be stored accordingly.

To ensure proper air circulation and minimize temperature variations, several rules should be observed. Foods must not be crowded together. Containers should be dry and covered before they are placed in the refrigerator. Doors should be opened only when necessary. Hot foods should be placed in the refrigerator to speed cooling. The mechanical units of the refrigerator must not be obstructed.

Refrigerators require daily and weekly care. Spilled food should be wiped up immediately. The inside and outside of refrigerator doors should be wiped daily with a clean damp cloth dipped in a detergent-water solution. Weekly, reach-in and pass-through refrigerators should be turned off, disconnected, and thoroughly cleaned with a sanitizing solution. The food should be removed and the inside of the unit and the shelves washed, rinsed, and dried. Baking soda or a sanitizer can be used to prevent odors. Defrost refrigerators when frost is ¼ inch thick on coils or other parts of the interior. Walk-in and roll-in refrigerators are usually thoroughly cleaned once or twice a year.

Temperature readings should be taken daily from all refrigerators. Some refrigerators have a recording thermometer which registers the temperature throughout a 24-hour period. Alarm bells or signals may signal when the refrigerator is not functioning.

FREEZERS

Freezers are used to store commercially frozen food at temperatures of -10° to 0°F. The freezer may also be used to freeze small amounts of freshly cooked foods. Frozen foods held above 0°F lose color, flavor, and quality. Temperature readings should be taken daily to check the performance of the freezer. An alarm system should sound when the freezer is not functioning or someone becomes entrapped.

Proper freezer use helps maintain food quality and wholesomeness. All items placed in the freezer should be wrapped in an air-tight wrapping or placed in an air-tight container to prevent ***freezer burn*** or dehydration, which results from loss of water from foods. Do not refreeze foods because undesirable changes in flavor, color, or texture will result. Bacterial growth may also occur when frozen foods thaw. Use thawed foods within 24 hours.

Clean the freezer daily by wiping the exterior with a damp cloth. Once a week, wash the exterior with a hot detergent solution. Rinse with a water and sanitizer solution, then dry.

Defrost the freezer once or twice a year, when frost becomes 3/8 inch thick on sides or coils. When defrosting, disconnect the freezer from the outlet. Remove all food packages, cover or wrap, and place them in the walk-in refrigerator. Scrape frost from surfaces with a broad, stiff plastic spatula or a special tool. *Never* use a knife, ice pick, or other sharp object. Use cold (not hot) running water to help loosen ice. Wash the interior with warm water and baking soda (one tablespoon baking soda to one quart water). Use a sanitizer to keep freezer free of odors. Wash exterior with hot detergent solution, rinse with water and sanitizer solution, then dry. Insert plug into outlet and turn unit on. Let the freezer run for at least half an hour before replacing frozen food. Inspect and inventory frozen food, then place older packages at front or top for use first. The first in, first out method ensures that foods purchased first are used first.

Report any signs that the refrigerator or freezer is malfunctioning to the supervisor immediately. Trouble signs include excessive cooling indicated by frost on the coils, unusual noises or vibrations, failure to operate, or failure to maintain proper temperature.

Holding and Serving Equipment

Holding and serving equipment is needed for hot foods, cold foods, and for transporting foods. Proper holding and serving equipment maintains the quality of food until it is served.

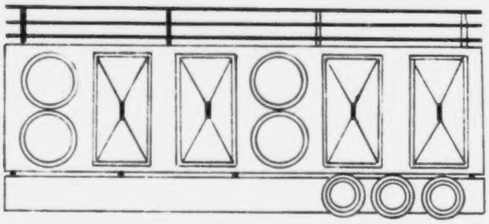
WARMERS

Food can be kept warm in standard equipment such as ovens and steamers or in a container of hot water on the range top. Special ***warmers*** include steam tables, waterless food warmers, bain-maries, heated pass-throughs, roll warmers, infrared lamps, heated carts, and heated pellets.

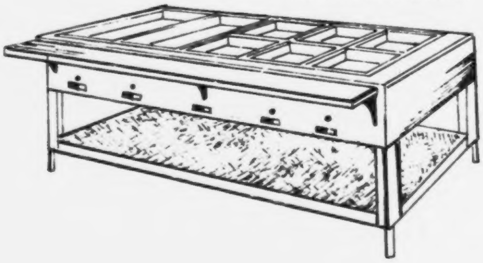
Steam Table

Steam tables keep foods hot and ready for immediate service. Steam tables are used in cafeterias and buffets. The table has compartments to hold pans of varying sizes. Steam heat is produced in a shallow water compartment below the bottom of the pans. The heat source may be gas or electric and the temperature of the water is controlled with a thermostat. The pans have covers to keep the heat in until serving time. Food should be arranged in the order it will be served. Foods on the steam table should be kept at a minimum temperature of 140°F. Spills should be wiped up immediately. The unit should be thoroughly cleaned immediately after use.

steam table

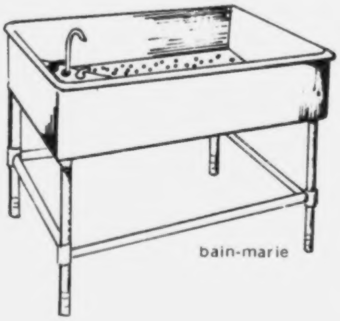


waterless food warmer



Waterless Food Warmer

The ***waterless food warmer*** provides different temperatures for different foods. Each section is controlled by valves and thermostats.



bain-marie

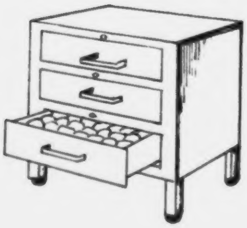
Bain-marie

A ***bain-marie*** is a deep pot for holding hot water. Another pot holding food may be placed inside. Bain-maries are also used for serving food.

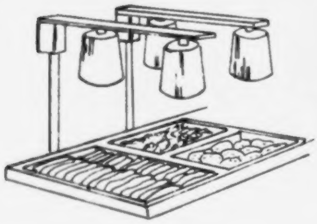
Heated Pass-throughs

Heated pass-throughs are shelves or surfaces between the food preparation and service areas. The pass-throughs are equipped with overhead infrared lamps to keep hot foods placed there hot until serving time. The lamps can be adjusted to keep the food warm without cooking.

Rollwarmers



Rollwarmers are used to keep breads and sweet rolls warm. The warmer has separate drawer compartments with individual controls for each drawer. The rollwarmer keeps bread from drying out. Crumbs should be removed daily after the unit cools. Drawers should be washed with a mild detergent and water solution, rinsed, and dried with a soft cloth.



Infrared Lamps

Infrared lamps are used to keep foods warm in the kitchen or on the cafeteria counter or buffet. They are especially good for holding deep-fried foods. The lamps may be stationary or pull-down types. Let the lamps cool before cleaning. Wash with a cloth and mild detergent and water solution. Rinse and dry with a soft cloth. Never use excessive pressure in cleaning.

Heated Carts

Heated carts are used for transporting heated foods to the place of service. Carts may be designed to hold bulk food or individually portioned food. Some units are plugged in to preheat, transported, then plugged in again to keep the foods warm.

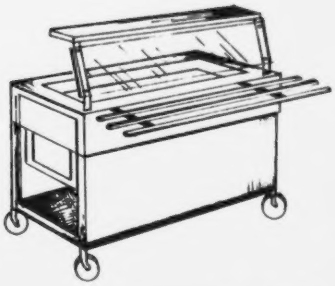
Heated Pellets

Heated pellets made of metal can be placed under trays to keep food warm. Hospitals frequently use this system. The pellets are usually heated in a conventional oven before being placed in the lower compartment of serving trays designed for this use. The pellets can also be chilled in the refrigerator or freezer to keep cold foods cold.

COLD FOOD UNITS

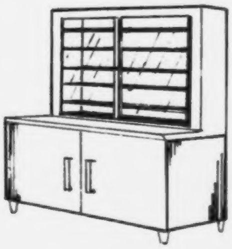
Foods may be kept cold in standard refrigerator units or in special cold service units. Special ***cold food units*** include cold food servers, salad cases, mobile refrigerators, and hot and cold carts.

Cold Food Server



The ***cold food server*** is used to keep cold food chilled. It is sometimes called an ice-bain-marie. It may be either stationary or portable. Before serving time the perforated inner lining is filled with crushed ice. The cold food is placed on this bed. As the ice melts, the water drips into the lower container.

The cold food server must be cleaned completely each day. Water is drained out the bottom. The ice is removed. Then the server is washed with a detergent solution. The unit is sanitized, rinsed, and wiped dry.



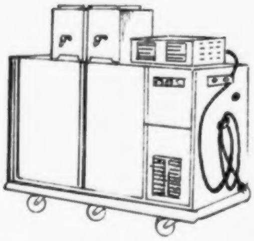
Salad Case

The ***salad case*** is a refrigerated cabinet with shelves for salad storage. Salads can be made in advance and stored or displayed in the case. The salad case should be cleaned with a detergent-water solution, rinsed, and dried with a soft cloth.

Mobile Refrigerators

Mobile refrigerators are used for storing foods and then distributing them to service areas. Chilled foods can also be placed in well-insulated carts and held until needed.

Hot and Cold Carts



Hot and cold carts combine features of both hot carts and mobile refrigerators. These carts are usually used for tray delivery. They are refrigerated on one side and heated on the other. Trays with cold foods are placed in the refrigerated side. Hot foods and cups for hot beverages are set in a drawer on a small tray in the hot side. Insulated jugs of coffee and tea may be set on top of the cart. Some models have beverage dispensers.

Other hot-cold carts use divided trays, one section for cold foods and the other for hot. Rubber gaskets separate the two sections as the tray slides in.

Food carts must be cleaned daily. Loose soil should be brushed out. The interior and exterior of the cart should be wiped with a detergent-water solution, rinsed, and dried with a clean cloth.

Report any malfunctions of holding and serving equipment to the supervisor. Malfunctions of temperature controls are the most urgent concern and should be reported to the supervisor immediately.

Cleaning and Disposal Equipment

The cleaning of tools and utensils used in food preparation and the washing of glassware, dishes, and tableware are essential in a food service operation. Essential equipment includes the garbage disposer, pot and pan sink, and commercial dishwasher.

GARBAGE DISPOSER

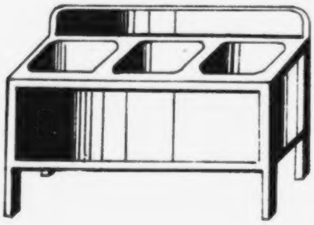
One of the best ways to dispose of the waste created in a food service establishment is to use a garbage disposer. A ***garbage disposer*** grinds garbage to a pulp and carries it into the sewer line.

The garbage disposer uses knife blades to grind the garbage and water to carry it into the sewer line. Pressing the "on" switch turns on the water and knife blades. Then the garbage is fed gradually into the disposer. Be careful not to overload the machine. Check to see that there are no large bones, corn cobs, cabbage cores, fruit pits, olive pits, toothpicks, silverware, or other items that would damage the knives in the disposer. Keep fingers and hands away from the knife blades. When the grinding action is complete, allow the machine to run at least five minutes longer to make sure that all garbage has been washed away from the knife blades.

To clean the disposer, turn the switch to the "off" position. Remove the cover and wash inside and outside with water and a mild detergent. Rinse with clear water. To deodorize, pour a weak solution of chlorine bleach into the clean disposer while it is running. Follow this with cold tap water to rinse the chlorine off the metal parts. Commercial deodorizers may also be used.

When a garbage disposer is not available, keep garbage covered in sanitized garbage cans. The containers should be covered with tight-fitting lids or covers. Plastic bags are used as liners to keep the containers clean. All waste should be removed from the premises daily. After the containers have been emptied, clean the inside and outside thoroughly. This cleaning should be done in a place where food, equipment, utensils, or food preparation areas will not be contaminated.

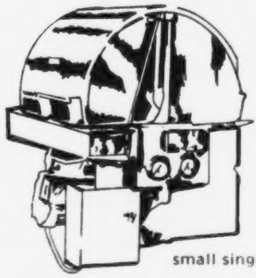
POT AND PAN SINK



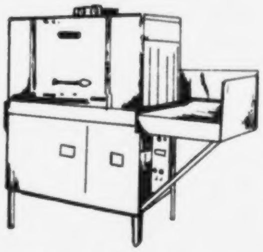
Cleaning large or bulky utensils, such as pots and pans, requires continuous effort by food service employees. Pots and pans are usually washed in a ***three-compartment sink***. One compartment is used for washing, another for rinsing, and the third for sanitizing.

COMMERCIAL DISHWASHER

Warewashing, or dishwashing, is the single biggest task in any food service operation. To reduce the hours of hard labor and reduce the amount of breakage, ***commercial dishwashing machines*** are used. These machines vary in size and design, but all of them require the same basic steps for effective dishwashing. These steps are scraping, prewashing, racking, washing (in machine), rinsing, sanitizing, air-drying, and storing clean utensils until the next use.

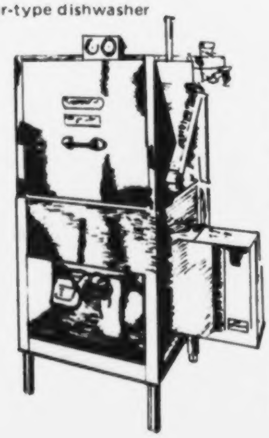


small single-tank dishwasher



single-tank dishwasher

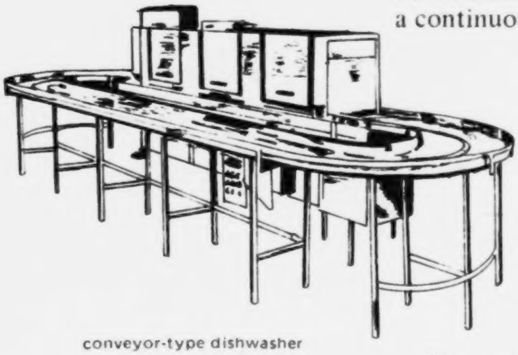
door-type dishwasher



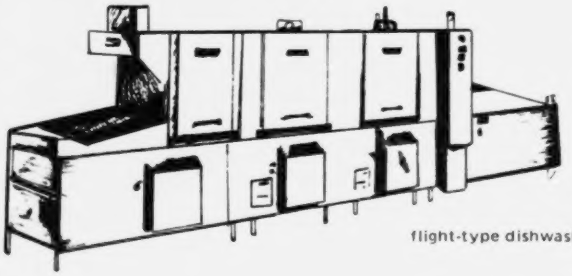
Most dishwashing machines fall into two categories: single-tank and multiple-tank machines. ***Single-tank machines*** are used in smaller establishments, for specialized operations in large establishments, or in areas where space and weight are of prime consideration. These machines have a single tank for wash water. The pump recirculates the wash water to spray each rack of dishes placed in the machine.

The most common single-tank machines are the door-type and the conveyor-type. The ***door-type machine*** has two doors on opposite sides of the machine that can be raised and lowered to allow dishes to be admitted and removed. Usually these two doors are interlocked so that if one door is raised or lowered, the other is also raised or lowered. When lowered into place, the doors provide a watertight compartment.

The other single-tank machine is the ***conveyor-type.*** Racks filled with utensils and tableware move through the machine on a ***conveyor chain***, a continuous moving belt.



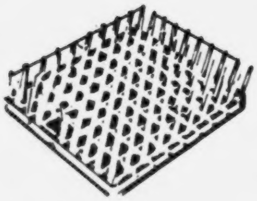
conveyor-type dishwasher



flight-type dishwasher

The ***multiple-tank*** machines are used in large food establishments where large numbers of utensils are washed. These machines can wash from 6,000 to 18,000 utensils per hour. The most commonly used multiple-tank machines are the ***flight-type*** machines.

In flight-type machines, utensils and tableware are placed individually on a continuous belt that carries them into, through, and out of the machine. Operators at the start of the machine load the conveyor belt with utensils. Operators at the other end remove the clean utensils from the belt. These workers must wear clean heat-resistant gloves to protect their hands from the heat of the utensils.



dish machine rack

Organization is the key to minimizing breakage in the dish room. The dish table should be organized with a pan of presoak solution for flatware and a decoy of each size plate and dish on the table. Racks should be provided for cups and glasses. This encourages dining room help to keep the dish table organized. Paper should be discarded, not mixed with dishes. Racks should be carefully organized for the dish machine. Place cups and glasses upside down in ***dish machine racks.*** Load all of one size and type of dish together in a rack. When loading dishes, scrape off heavy food soil. Prerinse heavily soiled dishes before they go into the dish machine. Prerinsing may be done with a hand spray or may be done automatically by some dish machines. Remove silver from the presoak solution and place in special flatware racks with the eating ends up, or place in a flat dish basket. Mix knives and forks with spoons to prevent nesting. Load the flatware racks loosely to ensure thorough washing.

Operating a dish machine requires attention to detail. Before using the dish machine, be sure the machine is clean. Close the drain valve tightly. Be sure the ***scrap trays*** are clean and in place. The scrap trays are screen-like devises at the bottom of the machine that collect food particles that were not removed when the utensils were scraped. Be sure the curtains in the dish machine are in place. Check the wash arms to be sure they are clean and that the spray openings are not clogged. Next, prepare the machine for use. Open the fill valves and fill the tanks. When full, shut the valves tightly. Fill the detergent and ***drying agent*** reservoirs. The drying agent helps prevent water spotting.

The temperature of wash and rinse waters are critical to the sanitation of dishes. Be sure the wash temperature gauge indicates a temperature of 140° to 160°F. The temperature of the first rinse should be 170°. The final rinse temperature should be 180° to 190°F for a proper sanitizing rinse. Some machines use an automatic chlorination system which adds chlorine for sanitizing in different cycles and uses lower temperatures.

Follow the manufacturer's instructions for using the dish machine. After the dishes are washed, allow them to stand a few minutes to air dry.

Unload flatware onto a clean, dry cloth on a sorting table. Handle clean flatware *only* by the handles and place in clean flatware trays. Tilt racks of cups and glasses for a moment to allow the water to run off their bottoms. Place racks of clean cups and glasses on wheeled dollies. Stack clean plates directly into plate carts. Handle clean plates only by the rim.

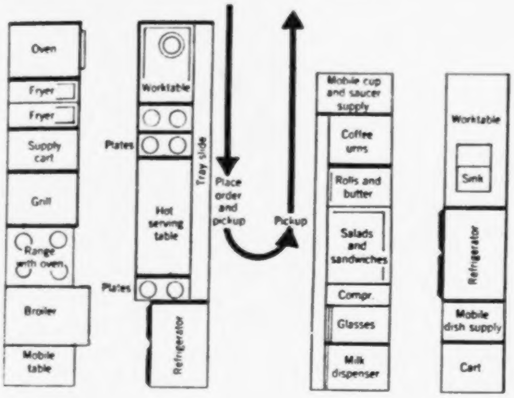
To clean the dish machine, turn off the electric, gas, or steam heaters. Open the drain valves and drain all the water from the tanks. Remove and empty the scrap trays into the garbage can. Wash the scrap trays in a hot detergent solution. Spray rinse and replace the scrap trays in the dish machine. Remove and wash the wash arms using a hose and brush. Remove, scrub, and wash the curtains in a hot detergent solution. Spray the inside of the machine thoroughly with a hose. Also hose off work tables, then scrub them with a hot detergent solution. Wipe the dish machine and work tables with a clean dry cloth or squeegee. Finally, scrub the walls and floors of the dish room.

Report any malfunctions of cleaning and disposal equipment to the supervisor immediately. For commercial dishwashers, malfunction could be indicated by low temperatures in the wash, rinse, or dry cycle or by dishes that do not come clean. For the disposer, malfunction could be indicated by unusual noises, overheating of the disposer motor, incomplete grinding of food wastes, or a back-up of food waste into the receiving portion of the disposer.

Work Stations

Each food service facility is divided into work centers called ***stations***. Each station is named for the tasks performed there. The stations are often referred to as beverage, cold, hot, bake, serving, and dishwashing stations. Certain equipment is associated with each work station. Beverage equipment is used in the beverage station. The cold food station must be near refrigerators and areas where vegetables and fruits are stored. The hot food station uses cooking equipment for preparing hot foods. The bake station uses ovens to prepare baked products. Serving stations utilize food service equipment. The dishwashing area utilizes pot and pan sinks and dishwashers.

The number and types of stations depend on the menu, the type of service, and the size of the kitchen. A restaurant with a menu featuring a wide variety of food demanding much preparation needs more stations than one with a limited menu. A restaurant using formal table service needs more stations than one using counter service. The space available for the kitchen limits the number of stations possible.


Oven
Fryer
Fryer
Supply cart
Grill
Range with oven
Broiler
Mobile table
Worktable
Plates
Tray slide
Hot serving table
Plates
Refrigerator
Place order and pickup
Pickup
Mobile cup and saucer supply
Coffee urns
Rolls and butter
Salads and sandwiches
Compr.
Glasses
Milk dispenser
Worktable
Sink
Refrigerator
Mobile dish supply
Cart

sample work
station layout

PLACEMENT OF STATIONS

The placement of the work stations is determined by the flow of both the food and the service. Usually, receiving and storage stations are at the beginning of the line. Each food storage area is located close to the station using it most. The baking station needs access to the dry storage area where flour, sugar, and other dry ingredients are stored.

The hot food stations are close to the refrigerators and freezers where meat, chicken, and fish are stored. The vegetable preparation station is near the vegetable storage area. This area may also be near the dining area since appetizers and salads are served before the main course.

The receiving and storage stations are followed by meat and vegetable preparation stations. Cooking, holding, and serving stations follow. Potwashing and dishwashing areas are not part of the food flow. The potwashing area is usually located close to the equipment storage area. The dishwashing area is near the dining room and storage areas for clean dishes and tableware. If the establishment has its own bakery, the bakery may also be a separate area. Baked goods and desserts are usually prepared before the peak hours of service and may be served from the pantry.

PLACEMENT OF EQUIPMENT IN STATIONS

The work flow in a station is usually from left to right. This may be a problem for some left-handed workers. Raw food and ingredients enter the station at the left. The finished food is removed at the right. Each station has the equipment needed for the tasks to be performed there. The placement of equipment in each work station is planned according to the flow of food within the station. As much as possible, small equipment is placed within arm's reach of the worker. Large pieces should be within a few steps. Work tables and counters are important parts of all work stations.

Points To Remember

- Cold storage equipment includes walk-in, reach-in, roll-in, and pass-through refrigerators and freezers.
- Foods require different temperatures for cold storage: raw fruits and vegetables (40°-45°F); dairy products (38°-40°F); meat, poultry, fish, and cooked dishes (32°-36°F); frozen foods (-10°- 0°F).
- All items placed in the freezer should be wrapped to prevent freezer burn.
- The temperatures of refrigerators and freezers should be checked at least twice a day. The units should be cleaned regularly and defrosted when needed.
- Holding and serving equipment includes warmers, cold food units, and hot and cold carts.
- Use and care suggestions from the manufacturer should be followed for holding and serving equipment. Malfunctions of equipment should be reported to the supervisor.
- Cleaning and disposal equipment includes the garbage disposer, pot and pan sink, and the commercial dishwasher.
- Sanitation is important when using cleaning and disposal equipment. All waste should be removed from the premises daily. Care should be taken to make sure water temperatures are correct.
- A food service facility is divided into work centers or stations. Typical work centers include beverage, cold, hot, bake, serving, and dishwashing stations.
- The placement of work stations is determined by the flow of food and service. Work within a station usually moves from left to right.

Words To Know

bain-marie
cold food server
cold food units
commercial dishwashing machine
conveyor chain
conveyor-type dish machine
dish machine racks
door-type dish machine
drying agent
flight-type dish machine
freezer
freezer burn
garbage disposer
heated cart
heated pass-through
heated pellet
hot and cold cart
infrared lamp
mobile refrigerator
pass-through refrigerator
reach-in refrigerator
refrigerator
roll-in refrigerator
roll warmer
salad case
scrap trays
single-tank dish machine
stations
steam table
three-compartment sink
walk-in refrigerator
warewashing
warmer
waterless food warmer

Questions For Review

1. At what temperature should each of the following foods be kept?
   a. raw fruits and vegetables
   b. dairy products
   c. meat, poultry, fish, and cooked dishes
   d. frozen foods

2. What is freezer burn and how can it be prevented?

3. What daily and weekly care is required for refrigerators and freezers?

4. Identify equipment which is used to keep cold food until it is served.

5. Explain cleaning procedures for the following holding and serving equipment:
   a. rollwarmers
   b. infrared lamps
   c. cold food server
   d. salad case
   e. hot and cold carts

6. What are two ways food service establishments use to dispose of garbage?

7. For what is each compartment of a three-compartment sink used when washing pots and pans?

8. Describe the types of dishwashing machines used in food service establishments.

9. Describe procedures for organizing soiled dishes in the dishroom.

10. Describe procedures for preparing the dish machine for use.

11. What temperatures are required for washing, first rinse, and final rinse when using the commercial dish machine?

12. How should dishes be handled after they are washed?

13. Name five work centers or stations commonly found in food service establishments.

14. What determines the placement of work stations in the food service establishment?

12

Chapter Twelve Food and Supplies

COMPETENCIES TO DEVELOP

- Receive and inspect food and supplies.
- Complete receiving records.
- Prepare food and supplies for storage, and then store.
- Maintain storage facilities at optimum conditions for food preservation.
- Issue and rotate food and supplies.

OBJECTIVES TO ACHIEVE

- Identify the forms and qualities of food available.
- Describe the purposes and uses of food specifications.
- Identify the types of supplies used in food service.
- Describe procedures for receiving and inspecting food and supplies.
- Outline procedures for storing food and supplies.
- Explain requisitioning procedures used in food service.
- Summarize procedures for inventorying food and supplies.

Food and supplies are essential to any food service operation. Both the foods used in preparing menu items and supplies used in food preparation and service (such as dishes, paper towels, and cloth napkins) must be replaced as they are used up or need to be replaced. It is the purchaser's job to place orders, called ***purchase orders***, to obtain needed food and supplies. These orders are based on the needs of the establishment.

When the orders are delivered, they must be carefully checked. The items must then be stored to maintain their quality. As the items are needed, they are obtained from the storeroom either by the food service worker or by requesting the items from a storeroom worker.

The storeroom worker fills the request and removes the items from the list of food and supplies on hand. As supplies become low, this information is provided to the purchaser so that new orders may be placed.

Food

Food purchases are based on the menu, food budget, labor cost and skill of personnel, season, and availability of food. These factors influence the form of food and quality of food needed. Once these decisions are made detailed descriptions, or ***specifications,*** for each food are written. Food orders are based on these specifications.

FORMS OF FOOD

Foods come in a variety of forms. Many foods are purchased fresh. Fruits, vegetables, eggs, and meat may all be purchased fresh. Other foods have been ***processed***. These foods have undergone some treatment, or process, to keep them from spoiling. Processing also reduces the time needed for food preparation. Frozen, canned, dehydrated, freeze-dried, and dried foods have all been processed. Salting, pickling, and sweetening are other methods of processing used to prevent food spoilage. Fruits and vegetables are available in all of these forms. Milk is available liquid, concentrated, or dried. Meats may be fresh, smoked or cured, canned, or frozen.

Many ***convenience*** forms of foods are used in the food service industry. Some are packaged as mixes. Some are partially processed. Others are ready to serve. These foods help to reduce labor costs and ensure consistent quality in the foods served.

FOOD QUALITY

Food in the United States must meet rigid standards of ***wholesomeness***. These standards ensure that the food is fit for humans to eat. All food shipped from one state to another must meet the standards established by the U.S. Department of Agriculture (USDA) and the Food and Drug Administration (FDA). The Federal Trade Commission (FTC) and the Bureau of Health are other federal government agencies which regulate food. State and local governments also have food regulations.

Grading

Besides standards of wholesomeness, the USDA also sets standards of quality for many foods. These standards are concerned with appearance, size, and texture of the product. The quality of a product is determined by ***grading***. Grading classifies foods according to standards of quality from the most to the least desirable. Products graded by the USDA bear a special shield that is easily recognized. The chart on the following page shows food grades commonly used in the United States. Foods are equally wholesome and nutritious regardless of their grade.

COMMON U.S. GRADES

MEATS

Product	1st Grade	2nd Grade	3rd Grade
Beef	USDA Prime	USDA Choice	USDA Good
Veal	USDA Prime	USDA Choice	USDA Good
Lamb	USDA Prime	USDA Choice	USDA Good

DAIRY PRODUCTS

Product	1st Grade	2nd Grade	3rd Grade
Butter	U.S. Grade AA	U.S. Grade A	U.S. Grade B
Cheddar Cheese	U.S. Grade AA	U.S. Grade A	U.S. Grade B
Swiss Cheese	U.S. Grade A	U.S. Grade B	U.S. Grade C
Nonfat dry milk	U.S. Extra Grade	U.S. Standard Grade	
Cottage Cheese	No Grades–May be marked USDA Quality Approved		

POULTRY AND EGGS

Product	1st Grade	2nd Grade	3rd Grade
Poultry	U.S. Grade A	U.S. Grade B	U.S. Grade C
Eggs	U.S. Grade AA Fresh Fancy Quality	U.S. Grade A	U.S. Grade B

PROCESSED FRUITS AND VEGETABLES AND RELATED PRODUCTS

Product	1st Grade	2nd Grade	3rd Grade
Fruits, Vegetables, Related Products	U.S. Grade A Fancy	U.S. Grade Choice or Extra Standard	U.S. Grade C Standard

Labeling

By law, food product labels must provide certain information. The Pure Food, Drugs, and Cosmetics Act and the Fair Packaging and Labeling Act require that all food labels show the following:

- The identity of the food by its common or usual name. For example, tomatoes, or green beans. The word ***imitation*** must be used on a label when the product is not as nutritious as the one it resembles and for which it is a substitute. "Imitation mayonnaise" is an example. If the product is similar to an existing one and is just as nutritious, a new name can be given. Egg substitutes are an example.

- The form of the food, unless it can be clearly seen. This might include the ***variety*** (cling or freestone peaches); the style of pack or form (whole, sliced, or diced); and the material in which the food is packed (water, syrup, juice, or oil).

- The name and address of the manufacturer, packer, or distributor.
- The net contents or net weight of the product.
- The size of the servings, if the number of servings is stated.
- The ingredients, listed in order of quantity, beginning with the largest amount. A list of ingredients is not required on ***standardized foods***. These are the 17 groups of foods for which the government has set mandatory recipes or ingredients. Examples of standardized foods include mayonnaise, catsup, peanut butter, and ice cream.
- Any artificial coloring or flavoring and chemical preservatives used must be listed whenever used.
- ***Nutrition labeling*** is required on foods with nutrients added, such as enriched bread, fortified cereal, and vitamin D fortified milk. It is also required on foods about which a nutritional claim is made in advertising, such as "lowfat" or "contains 12 important vitamins." The upper half of a nutrition label shows the serving size, the number of servings in the container, and the number of grams of protein, carbohydrate, and fat in each serving. The lower half of the label gives the percentages of the U.S. Recommended Daily Allowances (U.S.RDA) for protein and at least seven vitamins and minerals that each serving of the food contains.

NUTRITION INFORMATION—PER ONE CUP SERVING
SERVINGS PER CONTAINER APPROX. 2

CALORIES	200	CARBOHYDRATE	52 g
PROTEIN	1 g	FAT	0 g

PERCENTAGE OF U.S. RECOMMENDED DAILY
ALLOWANCES (U.S. RDA) PER ONE CUP SERVING

PROTEIN	3	NIACIN	6
VITAMIN A	45	CALCIUM	2
VITAMIN C	10	IRON	4
THIAMIN	4	PHOSPHORUS	2
RIBOFLAVIN	2	MAGNESIUM	4

FOOD SPECIFICATIONS

Written specifications, or instructions, are used in ordering food and supplies for the food service establishment. These specifications tell the ***vendor***, or seller of the product, what is wanted. They spell out the standards of the food service facility. Each ***standard*** identifies the quality required in a specific product. Standards for food and supplies vary from one restaurant or institution to another. Some chain restaurants follow standards which are set as recipes are developed in their test kitchens.

Specifications for food and supplies usually include:

- The ***trade*** or ***common name*** of the product. Examples: chicken, homogenized milk, apricots.
- The amount to be purchased. Examples: case, pound, carton.
- The brand or quality desired. Examples: Libby, U.S. Grade A.
- A description of the product, including color, size, texture, cut, style, pack, etc. Examples: Florida oranges, delicious apples, short-cut green beans, cream-style corn, 4-oz. veal cutlet, light syrup pack, No. 10 cans, aged beef, sliced peaches, rib roast with ½-inch fat, pure vanilla, unsweetened pineapple juice.
- The sanitation standards required. Examples: U.S. inspected, hard frozen, interior temperature 40°F.

- The unit on which prices are to be quoted. Examples: 6 No. 10 cans per case, 4 1-gal. jars, per pound, per dozen.

Both the person placing the order and the person receiving and inspecting deliveries must know the purchasing specifications of the establishment.

Supplies

A food service facility requires many things other than food to operate. Dishes, flatware, and glassware may be broken or lost. Table-top items such as candles and salt/pepper shakers may be used up or become unsightly. Tablecloths, napkins, and uniforms become worn and stained. These items must be replaced periodically. Most establishments use some disposables such as containers for food, paper bags, paper napkins, drinking straws, paper towels, and toilet tissue. Cleaning supplies (chemicals) are needed for dishwashing and general cleaning.

The exact items needed vary from one food service establishment to another. However, the procedures for purchasing these items are similar to the procedures used for purchasing food. Exact specifications are needed so that prices may be compared and a supplier selected. Most supplies are used up regularly.

Receiving

Good purchasing practices are of little value if the food and supplies are not checked carefully when received. In the usual method of receiving, the receiving clerk receives duplicate purchase orders which list the goods ordered. All items should be checked to make sure that what was ordered is received. No invoice or delivery slip should be received without checking what is delivered. Checking an order should include checking:

- Items delivered. Are they what was ordered? Do they meet specifications?

- Quantity. Does the amount delivered match the amount ordered? Is the quantity indicated on the invoice correct?

- Price. Was the price quoted or bid what was charged? Are multiplication and addition correct?

- Quality. Are the items in good condition? Are frozen foods frozen, refrigerated items cold, items fresh according to date, packages or containers clean and undamaged?

Some establishments use a method called "***blind receiving.***" In this method, the receiving clerk receives no information about what has been ordered. Vendors omit prices and quantities from their delivery tickets. The receiving clerk must count or weigh every item delivered and make an appropriate entry on the receiving record. This method forces the receiving clerk to count or weigh each item, not just to copy the information from the invoice or delivery ticket.

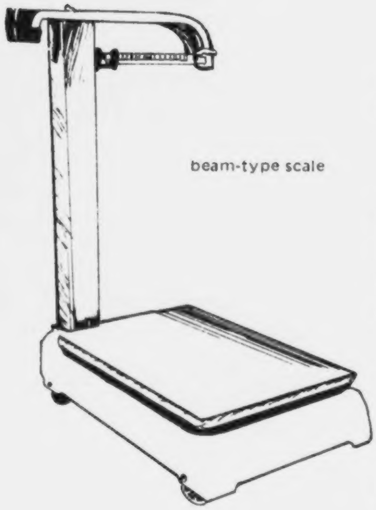
Methods of receiving vary from one food service operation to another. The important thing to remember is that food and supplies should be received and checked in an efficient and orderly manner.

The best time to correct errors in deliveries is while the delivery person is still there. Then a credit memo can be written, unwanted damaged merchandise can be returned, and indications made on the invoice before the manager signs or before the delivery report is completed.

CHECKING QUANTITY

Food purchased by weight should be weighed when it is received, since weight shortages in quantity purchases are costly. Money is lost if an order is short by even a few ounces.

Automatic ***indication-type*** or ***beam-type scales*** are used in the receiving area for accurate weighing. Examples of these two types of scales are illustrated at the side.

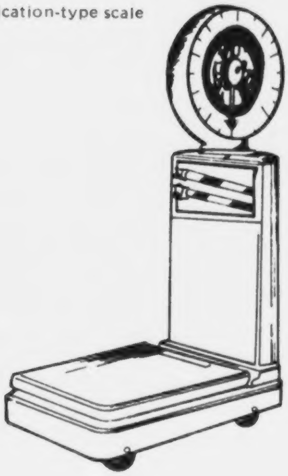


beam-type scale

Each different item should be weighed separately. Remember the weight of the packaging should not be counted as part of the weight. Even if the total weight agrees with the total shown on the delivery ticket, some items may be short and some over in weight. Items vary in price. A weight shortage in a high-priced item cannot be made up by receiving more of a less expensive item.

Items not purchased by weight should be counted accurately to make sure that all items have been received as shown on the delivery slip from the vendor. Any error in count should be called to the attention of the person in charge of the receiving area so that proper procedures can be followed.

Indication-type scale



CHECKING QUALITY

Losses can occur even when the correct quantity of goods is received if the goods are of the wrong quality. To meet quality standards, the goods delivered should be the right grade, style, pack, and fill. They should be fresh. They should have been cared for properly. If there is any question about the quality of goods delivered, the person responsible for checking quality should be called.

To inspect fresh fruits and vegetables, randomly check several from the crate. Be sure to check those in the center and bottom of the crate, too.

Take the temperature of highly perishable and chilled foods, such as milk and poultry, and of all frozen items. Observe all frozen foods for signs of past thawing and refreezing, such as ice in the bottom of containers or signs of freezer burn. Learn dating codes on perishable foods and check whether fresh items are being delivered. ***Perishable foods*** are those which spoil quickly.

Check labels of canned foods to be sure the goods delivered are of the size and quality ordered. Check the style, pack, size, and fill against what was ordered. The ***style*** is the cut of the product. The style could be whole, chunk, flaked, pieces, short cuts, puree, etc. The ***pack*** is the medium in which the food is canned. The medium could be water, oil, oil and vinegar, light syrup, heavy syrup, or natural juice. The ***fill*** is the weight of the contents. Most canned products are packaged by weight, not by volume.

Workers responsible for inspecting incoming food and supplies should be able to identify damaged, contaminated, and spoiled products. Checks for specific foods are given in the chart below. The chart also indicates special storage considerations for the foods listed.

GUIDELINES FOR RECEIVING, INSPECTING, AND STORING FOOD

Food		**Guidelines**
MEAT (beef, veal, lamb)	Color	• Brown, green, or purple blotches are signs of spoilage. Black, white, and green spots are signs of molds.
	Odor	• Except for aged beef, meat should never smell sour.
	Texture	• Unfrozen meat should be firm and elastic to the touch. No meat should be slimy, sticky, or dry to the touch.
	Temperature	• Unfrozen meat should be delivered at 40°F (4.4° C) or below. Frozen meat should be delivered below a temperature of 0°F (-17.7°C).
	Packaging	• Broken cartons, dirty meat wrappers, and torn vacuum packaging are all indicators of poor sanitary practices and possible contamination.
	Storage	• Store as soon as possible in refrigerator or freezer. Wrap raw meat loosely. Hang quarters and sides of beef uncovered on a clean, sanitary hook with nothing underneath. Store frozen meat in freezer in original wrapping. Be sure frozen meats are wrapped and sealed in moisture-proof paper or containers. Do *not* freeze processed meats like ham, bacon, and luncheon meat delivered unfrozen.
POULTRY	Color	• Poultry with a purplish or greenish overall cast, and a greenish discoloration around the neck and vent should be rejected. Darkened wing tips are also a sign of spoilage.
	Odor	• An abnormal odor is a sign of spoilage.
	Texture	• Soft, flabby flesh usually means poor quality. Stickiness under the wings and around the joints are signs of spoilage.
	Temperature	• Same as meat.
	Packaging	• Same as meat.
	Storage	• Wrap whole birds loosely for refrigeration of up to three days. Refrigerate giblets and cooked, cut-up pieces of poultry no more than two days. Store frozen poultry in freezer in original wrapping.

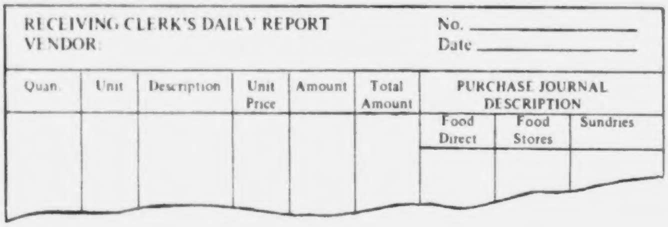
SEAFOOD	Appearance	• Fresh fish have bright red, moist gills. The eyes are bulging and clear. The flesh and belly area are firm and elastic. In stale fish, the gill slits are gray or gray-green, and dry; the eyes are cloudy, red-bordered, and sunken; the flesh is soft and yielding. Look for parasites and diseases–tumors, abscesses, and cysts–in fresh-water varieties. Fresh lobster and other shellfish should be alive on delivery. Reject shellfish which give off a strong odor. Frozen fish should show no signs that it has been thawed and refrozen. Refrozen fish will have a soft, flabby flesh, a sour odor, and an off-color. Refrozen fillets may have a brown coloring at the edges. The wrapping paper will be moist, slimy, and discolored. The packaging may be deformed by internal pressure.
	Odor	• Fish or shellfish with an ammonia odor are deteriorating and should be rejected.
	Storage	• Refrigerate and cover fresh fish with crushed ice for storage up to three days. Wrap fish to prevent waterlogging. Un-iced fish should be used within 24 hours. Store frozen fish in freezer in original wrapping.
EGGS	Age	• Fresh eggs should not be more than 30 days old.
	Appearance	• The shells should not be cracked, checked, or dirty.
	Freshness	• When broken open, the white should cling to the yolk. The yolk should be firm and not break easily. In a very fresh egg of top quality, the white will stand up well on its own. Frozen or dehydrated eggs should have been pasteurized.
	Storage	• Refrigerate fresh eggs. *Never* wash eggs before refrigeration. Powdered dry eggs are semiperishable. Refrigerate reconstituted eggs.
DAIRY PRODUCTS		
Milk	Expiration date	• Milk delivered after the expiration date marked on the container should be rejected.
	Temperature	• Milk whose temperature is above 40°F on delivery should be rejected.
	Taste	• Fresh, clean milk has a sweetish taste. Sour, bitter, or off-tasting milk should be rejected.
Butter	Appearance	• Butter should have a uniform color. It should be free of mold, specks, and other substances.
	Odor	• Butter which is ***rancid*** or which has absorbed foreign odors should be rejected.
	Texture	• Butter should have a firm texture.
	Taste	• Butter should have a sweet, fresh flavor.
	Packaging	• Butter should be received in clean, unbroken containers.
Cheese	Appearance	• Cheese should have uniform color. Cheese that is dried out or has uncharacteristic mold should be rejected. If the cheese has a ***rind***, the rind should be clean and unbroken.
	Texture	• The texture should be characteristic of the type cheese.
	Taste	• Flavor should be characteristic of the type cheese.
	Storage	• Keep dairy products tightly covered. Store away from sources of strong odor, such as fish, peaches, onions, or cabbage. Use cottage cheese cheese within three days, milk and cream within five to seven days after date marked on carton.

FRUITS AND VEGETABLES	Color	• Color should be bright, not dull or discolored.
	Texture	• Pieces should be fully developed and show no outward signs of spoilage such as bruises, decay, cuts, punctures, shriveling, wilting, leaking, or mold.
	Taste	• Taste is the best test of quality.
	Storage	• Refrigerate most fresh fruits and vegetables. Ripen apples, avocados, bananas, and pears at room temperature. To prevent mold, do *not* wash berries, cherries, and plums before refrigeration. Store citrus fruits at a cool room temperature. Store potatoes in ventilated containers in a cool, dry, dark place. Do not refrigerate sweet potatoes, mature onions, hard-rind squashes, eggplants, and rutabagas.
FROZEN FOODS	Appearance	• Frozen food should not show signs of thawing and refreezing. There should be no fluid or frozen liquids in the food carton or ice crystals on the product itself.
	Temperature	• The temperature of frozen foods should not not be above 0°F. Ice cream, however, may be delivered and stored at a temperature of 6 to 10°F. To check temperature, insert a clean and sanitized stainless steel thermometer under the top layer of goods inside the package or through a hole punched in the unopened case. Leave the thermometer in place for 5 minutes.
	Storage	• Store food promptly after delivery. Store in original carton or repackage if carton is broken or space is not available for carton.
CANNED FOODS	Cans	• Check cans for swelled tops or bottoms, leakage, improper sealing at top or side, penetrating rust and dents, and dents along the side seams of the can which make it impossible to open with a manual can opener. Also beware of pinholes in cans containing acid foods. To check for possible pinholes, empty the contents and hold the can up to strong light.
	Contents	• Discard any food that appears abnormal in odor, color, or texture. Discard foods that are foamy or that have a milky-colored liquid. DO NOT TASTE-TEST SUCH FOODS.
	Storage	• Store canned goods on shelves in dry storage area. Maintain temperatures of 50-70°F. Use first-in, first-out method of storage.
DRY FOODS	Containers	• Cartons should be dry and undamaged. Reject foods in damaged containers.
	Color	• Be sure color is standard for product.
	Odor	• Reject products with odors which are not standard for the product.
	Insects	• Check for tiny insects or insect eggs in cereal or flour by sprinkling a bit of the product on brown paper.
	Storage	• Store dry foods in airtight containers on shelves in dry storage area. Maintain temperatures of 50-70°F. Rotate dry foods using the first-in, first-out method.

RECEIVING RECORDS AND FORMS

Receiving records are used to maintain a daily record of food and supplies received by the establishment. The principle ways of keeping these records are receiving sheets, individual receiving tickets, and receiving stamps. In small establishments, the receipt of food and supplies may be recorded in a ledger.

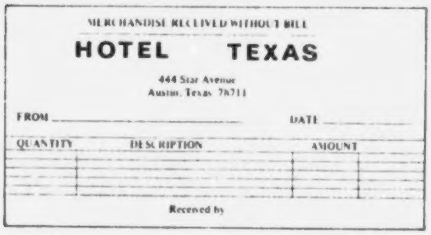
Receiving sheets contain the following information: the vendor's name, the date, a description of items received, and the quantity received. The description of the item usually includes the brand name, grade, style, and other identifying information. The quantity is designated by count, weight, and size. In some instances, the unit, total cost of items, and the order number are recorded also. Receiving records are usually made out in duplicate. One copy is kept by the receiving clerk and one is sent to the accounting department. A sample receiving record is shown in the following illustration.



RECEIVING CLERK'S DAILY REPORT
VENDOR:
No. ____________
Date ____________

Quan.	Unit	Description	Unit Price	Amount	Total Amount	PURCHASE JOURNAL DESCRIPTION		
						Food Direct	Food Stores	Sundries

Receiving tickets are used when merchandise is received without accompanying invoices. The same information is included on the receiving ticket as on the receiving record. Receiving tickets are sent to the accounting department for use in checking against the purchase order and invoice. When the receiving ticket is used, a receiving record is not kept. A sample receiving ticket is shown below.



MERCHANDISE RECEIVED WITHOUT BILL
HOTEL TEXAS
444 Star Avenue
Austin, Texas 78711

FROM ____________ DATE ____________

QUANTITY	DESCRIPTION	AMOUNT	

Received by

When invoices, invoice duplicates, or vendor's delivery tickets accompany a delivery, they should be first stamped with a ***receiving stamp***. The receiving stamp usually contains four check points as shown in the illustration below. The first checkpoint is receiving. After the delivery has been checked, the receiving stamp should be initialed and dated by the receiving clerk.

RECEIVED BY. . . . . .DATE. . . . .
PRICES & EXTENSION CHECKED BY. . . . .
DEPARTMENT HEAD APPROVAL. . . . .
PAYMENT APPROVAL. . . . .

Storing Food and Supplies

Improperly stored food is a potential source of contamination and spoilage. Different kinds of food have different storage requirements. However, all food should be kept in areas that are clean and used only for storing food.

MARKING MERCHANDISE RECEIVED

Perishable merchandise should be marked or tagged as it is received. The following information should be recorded on the tag or marked on the side of the case or package:
- Date of receipt
- Name of vendor
- Description of merchandise
- Weight or count when received.

The unit price and total price may also be included on the tag.

Marking is done for several reasons. Marking gives a weight or count which can be checked at a later time for accuracy of the original receipt. It aids in using items in the order they were received. It also eliminates the need to weigh or count items still in the original package before issuing them to the kitchen.

Foods should be used on a ***"first-in, first-out"*** (FI-FO) basis. This means that foods purchased first should be used first. Most food service establishments use a system to ensure that this rule is observed. The most common system is dating goods upon receipt and placing new deliveries in the rear of storage areas.

To keep most foods clean, wrap in material that is moisture-proof and airtight. All wrappers or containers used for storing food should be clean. Any carts used in transporting food to and from storage areas should be kept clean and should not be used for other purposes such as transporting garbage.

The three major storage areas in the food service establishment are: (1) refrigerated storage, (2) freezer storage, and (3) dry storage. Each storage area has its own sanitation requirements.

REFRIGERATOR STORAGE

Refrigeration is used for short-term holding of perishable items. Refrigeration slows growth of bacteria in foods, but does not destroy bacteria already present in food.

Meat, fish, and dairy products require the lowest refrigeration temperatures. Fruits and vegetables need higher temperatures. If one refrigeration unit is used for more than one kind of food, the colder spots should be identified and used for foods requiring the lowest temperatures. If separate refrigerators are used, each can be set to a temperature suitable for the foods stored there. The temperature and humidity requirements of foods which must be refrigerated are:

Food	**Temperature**	**Relative Humidity %**
Meat and Poultry	32 to 36°F (0 to 2.2°C)	75 to 85
Fish	30 to 34°F (−1.1 to 1.1°C)	75 to 85
Dairy Products	38 to 40°F (3.3 to 4.4°C)	75 to 85
Most Fruits and Vegetables	40 to 45°F (4.4 to 7.2°C)	85 to 95

A close watch should be kept on the temperature of all refrigerators. Units not equipped with a thermometer should have one placed in the warmest part of the refrigerator. Thermometers should be checked regularly for accuracy.

Refrigerators should be cleaned and defrosted regularly. Shelves should be removed and cleaned. All interior surfaces should be cleaned thoroughly.

For safe and efficient refrigerator operation, observe these guidelines.

- Do not overfill refrigerators. Overfilling makes cleaning difficult and may prevent air circulation necessary for maintaining proper temperatures.
- Store all foods in clean, nonabsorbent, covered containers or in their original package.
- Space containers to ensure air circulation.
- Avoid lining shelves as it interferes with air circulation.
- In walk-ins, store food away from walls and off floors to prevent contamination from insects, rodents, cleaning solutions, and spillage.
- Avoid adding large amounts of warmer foods to the refrigerator at once. Divide large amounts of food into small containers and shallow pans to ensure thorough quick cooling, stirring periodically, if necessary.
- Open a refrigerator only after identifying products needed, not before. Make as few trips to the refrigerator as possible.

FREEZER STORAGE

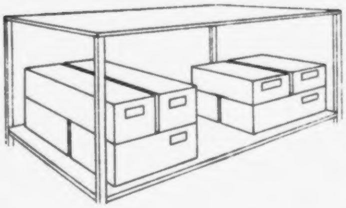
Most freezers used in food service establishments are designed *only* for storing already-frozen foods. Freezers capable of processing unfrozen foods must be capable of producing temperatures below -20°F. These freezers are called ***blast freezers*** or ***plate freezers***.

Freezers are useful for long-term storage of many perishable foods. However, lengthy freezer storage increases opportunities for contamination and spoilage. In addition, many frozen foods deteriorate rapidily. Items that deteriorate in freezer storage include hamburger, fatty fish, turkey, pork, creamed foods, custards, gravies, sauces, and puddings.

For safe and efficient freezer operation, follow these guidelines.

- Maintain an air temperature between -10 and 0°F (-23.3 and -17.7°C).
- Use one or more easily visible thermometers or other mechanisms to record freezer temperature and to check for "hot" spots.
- Defrost upright freezers as often as recommended in operator's manual.
- Store frozen foods promptly after delivery.
- Store frozen foods in moisture-proof material or containers.
- Store frozen-food products in the original cartons in which they were shipped. Repackage if carton is broken or space is not available for original cartons.
- Open freezer doors only when necessary and remove as many items as possible at once.
- Remove from storage only the quantities of frozen food that can be used immediately.
- Use frozen foods on a "first-in, first-out" (FI - FO) basis.

DRY STORAGE



Dry storage areas should be well-ventilated, well-lighted, clean, and protected from pests and excessive moisture. Temperatures of 50 to 70°F should be maintained in dry storage areas. A temperature of 50°F increases the shelf life of many products. (***Shelf life*** refers to the length of time a product can be stored without serious change in quality.) A thermometer should be used to check the temperature of the dry storage area regularly. A relative humidity of 50 to 60 percent is satisfactory for most foods in dry storage. A ***hygrometer*** may be used to check relative humidity. Adequate ventilation is necessary to maintain the quality of foods in dry storage and to prevent insect infestation.

The dry storage area must be swept and cleaned regularly. Walls, ceiling, floor, shelves, light fixtures, and racks should all be cleaned on a routine basis.

To ensure safety and sanitation in the dry storage area, four additional rules should be observed. *Never* store food directly on the floor. *Never* smoke in the dry storage area. *Never* keep garbage in the area where food is stored. Store heavy and bulky items on shelves or in bins closest to the floor.

STORAGE OF SPECIFIC FOODS

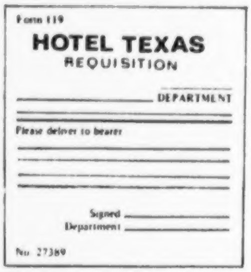
Procedures for storing specific foods are described in the chart on receiving, inspecting, and storing foods. The chart, earlier in this chapter, shows how long specific foods may be kept in the refrigerator, freezer, or dry storage area. The recommendations for maximum storage periods in refrigerators and freezers should be followed carefully. Dry goods keep longer, but eventually loose quality.

NON-FOOD STORAGE

Non-food items, especially cleaning products, should be stored separately from food products. Storage locations should be accessible to the areas where the items are used. Storages areas for non-food items should be kept clean and dry.

Requisitioning

In larger establishments, a receiving clerk or storeroom worker may also issue supplies to the various departments in the food service operation. ***Issuing*** refers to supplying each department with the items they request or ***requisition***. To obtain supplies, workers must complete a requisition, or written order, for needed supplies. The department head must sign the form before the order can be filled. The requisition, or " rec," is sent to the storeroom to be filled by the storeroom worker. Supplies should not be issued without a signed requisition. Issuing supplies without authorization can cost the storeroom worker's job. A sample requisition is shown below.



Form 119

HOTEL TEXAS
REQUISITION

______________ DEPARTMENT

Please deliver to bearer

Signed ______________
Department ______________

No. 27389

When completing the requisition form, include the date and the department requesting the supplies. Clearly state the name and grade of each item. A requisition for three cans of beans is not clear. This could mean green beans, lima beans, pinto beans, pork and beans, etc. Three No. 10 cans of French-cut green beans is clearer. Therefore, it is important to state on the requisition form the size can and the grade of each item needed.

When the requisition reaches the storeroom, the storeroom worker assembles the order beginning with the least perishable items. Orders for staple items, such as flour, shortening, and baking powder, are filled immediately from supplies on hand. Special items which are not used too frequently may have to be ordered as they are needed for special recipes. Items requisitioned are delivered to the appropriate department.

Inventorying

An ***inventory*** is an itemized list of food and supplies on hand. Most establishments serving food take ***physical inventories*** at the end of each week or month. To do this, all items on hand are counted and listed. A ***perpetual inventory*** record is used in some establishments. It shows how much food is used on a daily basis. An actual physical inventory is done less often.

To take an inventory, use inventory sheets which list items by storage location. Usually two persons take an inventory. One person checks the shelves and calls out the items and amounts on hand. The other person records this information on the inventory sheets.

It is better to start at one end of the storage area and call out items in their order on the shelf rather than to look for items using the order listed on the inventory sheet. If the latter method is used, items are easily overlooked.

The inventory is used to determine what supplies need to be ordered. It can also be used to determine the cost of food used during the last week or month. This is done as follows:

- List the total cost of food on hand at the previous inventory period.
- Add the daily food purchases.
- Subtract the present inventory on hand.
- The answer is the overall cost of food used.

Points To Remember

- Foods come in a variety of forms. They may be fresh or processed. Processed foods include frozen, canned, dehydrated, freeze-dried, and dried foods. Other methods of processing are salting, pickling, and sweetening.
- Standards for wholesomeness are established by the U.S. Department of Agriculture (USDA) and the Food and Drug Administration (FDA). The Federal Trade Commission (FTC) and the Bureau of Health and state and local agencies also regulate food.
- The quality of a food product is expressed by grades from most to least desirable. Foods are equally wholesome and nutritious regardless of their grade.
- Food product labels must show the identity of the food by its common or usual name; the form of the food (unless it can be clearly seen); the name and address of the manufacturer, packer, or distributor; the net contents or net weight of the product; the size of the servings (if the number of servings is stated); the ingredients in order of quantity beginning with the largest amount; and nutrition labeling (if nutrients have been added).
- Written specifications are used in ordering food and supplies for the food service establishment. Specifications usually include the trade or common name of the product, the amount to be purchased, the brand or quality desired, a description of the product, the sanitation standards required, and the unit on which prices are to be quoted.

- Supplies used in a food service facility may include dishes, flatware, glassware, tabletop items, tablecloths and napkins, uniforms, paper products, and cleaning supplies.

- Orders received by the food service facility should be checked to be sure that the items delivered were what was ordered and that they meet the specifications requested, that the quantity ordered was actually delivered, that the price charged was the price quoted, and that the items are of acceptable quality and are in good condition.

- When the "blind receiving" method is used, the receiving clerk must count or weigh every item delivered and make an appropriate entry on the receiving record.

- Receiving records are used to maintain a daily record of food and supplies received by the establishment. The principle ways of keeping these records are receiving sheets, individual receiving tickets, and receiving stamps.

- Perishable merchandise should be marked or tagged as it is received with the date of receipt, name of vendor, description of merchandise, and weight or count when received. The unit price and total price may also be included on the tag.

- Foods should be used on a "first-in, first-out" (FI-FO) basis.

- The three major storage areas in the food service establishment are: (1) refrigerated storage, (2) freezer storage, and (3) dry storage. Each storage area has its own sanitation requirements.

- Refrigeration storage is used for short-term holding of perishable items, and slows the growth of bacteria in foods.

- Freezers are useful for long-term storage of perishable foods. A temperature between -10 and 0°F should be maintained.

- Dry storage areas should maintain a temperature between 50-70°F and should be well ventilated, well-lighted, and clean.

- Non-food items, especially cleaning products, should be stored separately from food products.

- The receiving clerk or storeroom worker issues food and supplies requisitioned by the various departments in the food service operation.

- An inventory is an itemized list of food and supplies on hand. Both physical inventories, actual counts of food and supplies on hand, and perpetual inventories, written records of food and supplies delivered and issued, are used in food service facilities.

Words To Know

beam-type scales
blast freezers
blind receiving
common name
convenience
fill
first-in, first-out
grading
hygrometer
imitation
indication scales
inventory
issuing
nutrition labeling
pack
perishable foods
perpetual inventory
physical inventory
plate freezers
processed
purchase orders
rancid
receiving records
receiving sheet
receiving stamp
receiving ticket
requisition
rind
shelf life
specifications
standard
standardized foods
style
trade name
variety
vendor
wholesomeness
written specifications

Questions For Review

1. In what two major forms may food be purchased? Give examples of each.
2. What agencies are responsible for regulating food?
3. What grades are used to indicate the quality of the following foods?
   a. meat
   b. eggs
   c. canned vegetables
   d. canned fruits
4. What information is required by law on food product labels?
5. What information do food and supply specifications usually include?
6. What supplies are used in food service facilities?
7. When receiving an order for food or supplies, what checks should be made?
8. Describe procedures for checking the quantity of foods and supplies delivered to the food service facility.
9. Describe procedures for checking the quality of foods and supplies delivered to the food service facility.
10. Describe guidelines for receiving, inspecting, and storing specific foods.
11. Name and describe procedures for using the three principle ways of keeping receiving records.

12. What information should be recorded on the tag or marked on the side of the case or package of perishable merchandise received?

13. Explain procedures for rotating foods on a "first-in, first-out" basis.

14. What are the three major storage areas in the food service establishment?

15. What effect does refrigeration have on the growth of bacteria?

16. Which foods require the lowest refrigeration temperatures? the highest refrigeration temperatures?

17. What guidelines should be observed for safe and efficient refrigerator operation?

18. What are the disadvantages of long-term freezer storage of food?

19. What guidelines should be observed for safe and efficient freezer operation?

20. What requirements should be met in dry storage areas?

21. What is meant by the term "shelf life"?

22. Where should non-food items be stored?

23. Describe procedures for requisitioning and issuing food and supplies in the food service establishment.

24. What is the difference between a physical inventory and a perpetual inventory?

25. What information is included on an inventory?

13

Chapter Thirteen Food Preparation Techniques

COMPETENCIES TO DEVELOP

- Adjust standard recipes to serve more or fewer persons than indicated.
- Read and follow recipe instructions.
- Use food preparation and service terms correctly.
- Assemble and prepare ingredients (or suitable substitutes) and equipment.
- Measure and weigh foods according to specifications in standard recipes.
- Use a variety of cooking techniques.
- Identify, use, and store spices, herbs, and extracts properly.
- Utilize convenience foods in food preparation.
- Use correct time and temperatures for energy-efficient food preparation.
- Set up and maintain individual work area utilizing time- and energy-saving techniques.

OBJECTIVES TO ACHIEVE

- Identify the information contained in a standard recipe.
- Recognize abbreviations used in standard recipes.
- Describe standard substitutions for ingredients.
- Cite equivalents commonly used in food preparation.
- Cite common can sizes and their approximate yields.
- Define food service terminology.
- Adjust recipes to increase or decrease the yield.

- Describe techniques which develop speed and accuracy in recipe use.
- Describe the five categories of cooking used in food preparation.
- Identify seasonings used in food preparation.
- Describe sanitary procedures for tasting food.
- Describe the use of convenience foods in food service.
- Describe work simplification techniques used in food service.
- Describe procedures for portioning foods.
- Outline procedures for plating food.
- Summarize considerations for garnishing food.

Consistency in the appearance and taste of food is a goal toward which every food service establishment should strive. To reach this goal, the food buyer carefully orders according to purchasing standards, and food preparation personnel help by carefully following standardized recipes. This means using standard weights and measures; appropriate equipment, tools, and utensils; and correct methods of preparation. Food service personnel contribute to the goal of consistency by accurately portioning and attractively garnishing foods.

Standard Recipes

Recipes are like formulas. Just as a chemist carefully follows a formula to make a compound, a cook must carefully follow a recipe to make a food product. A ***standard*** or dependable ***recipe*** is, therefore, a must if the result is always to be of the same quality. Standard recipes help maintain quality and cost control in quantity food production. Some food service establishments develop and test (or standardize) their own recipes. Others use standard recipes from quantity cookbooks. Standard recipes include the following information:

- Amount of ingredients, by weight or volume, in order of use
- Type and size of utensils and tools to be used
- Clear directions about how to combine ingredients
- Cooking methods, temperatures, and time
- Weight or volume to be placed in a specific container
- Size of servings, including type and size portioning device
- Number of servings or portions per pan, quart, or gallon
- Yield in cups, quarts, or gallons
- Terms which are familiar to most cooks.

Ingredients are the foods used to prepare a recipe. Food preparation personnel must be familiar with many types of ingredients. Standardized recipes specify whether ingredients are to be measured by weight or volume. Weighing ingredients is the quickest, easiest, and most accurate way to measure large quantities. This method is almost always used in food service. However, smaller amounts may be measured by volume. Volume measurements include cans, cups, tablespoons, teaspoons, and fractions of teaspoons.

Standardized recipes specify the types of utensils and tools to be used in preparing ingredients. Recipes for baked products usually specify the pan size to be used.

Food preparation methods are specified as needed in standardized recipes. Food preparation workers must know and understand a variety of food preparation terms. Most recipes indicate specific temperatures for cooking foods. If the temperature used is too low, the food will be undercooked. If it is too high, the food will be overcooked, dry, or burned. For cooking on top of the range, temperatures are usually specified as boiling, low, or simmer. If more exact temperatures are specified, a thermometer or thermostat must be used. The length of cooking time must be observed to ensure a standard product.

Standardized recipes also specify the means for controlling portion size. ***Portion*** is another word for serving size. Portions may be controlled by weighing foods on a portion scale, by measuring volume with a ladle scoop, by measuring length and width, or by using a specific size container.

Below is a sample of a standardized recipe:

POTATO REFRIGERATOR ROLLS YIELD: 9-10 doz. rolls

Ingredients	Amount	Preparation Procedure
Potatoes, Mashed	1 cup	1. Peel 2 medium potatoes and cut into several pieces. 2. Boil in small amount of water until soft. 3. Drain and mash until smooth. 4. Cool until lukewarm.
Yeast, Active Dry	1 pkg.	1. Place yeast and sugar in a bowl.
Sugar, Granulated	2/3 cup	2. Add warm water (not hot) and mix.
Water, Warm	1 1/2 cups	3. Let stand 10 minutes.
Salt	1 1/2 tsp.	1. Add salt, shortening, two eggs and lukewarm mashed potatoes to yeast/water mixture.
Shortening (part butter or margarine makes a particularly rich product)	2/3 cup	
Eggs	2	2. Stir together.
Flour, Sifted	7 - 7 1/2 cups	1. Mix in flour until dough is easy to handle.

Ingredients	Amount	Preparation Procedure
		1. Turn onto lightly floured board. 2. Knead until smooth and elastic. 3. Place in greased bowl. 4. Turn dough so top is greased. 5. Cover with greased wax paper or plastic wrap and damp cloth. 6. Let rise until double (approximately 1 1/2 hour). 7. Punch down, cover, and refrigerate.
		1. Shape into rolls. (Use 1/2 oz. raw dough for petite rolls.) 2. Place 1-2 in. apart on greased baking sheet. 3. Cover and let rise until double in size (1 1/2 - 2 hours.) 4. Preheat oven 400°. 5. Bake 12-15 minutes. 6. Remove from pan immediately and apply desired topping.

NOTES: Instant mashed potatoes or leftover potatoes may be used if desired. Be sure they are ***lukewarm***, not *hot* when added to the recipe. If desired, rolls may be baked the day before and reheated at serving time. Do not place topping on rolls until they are ready to serve.

SERVING INFORMATION: Serve warm.

ABBREVIATIONS

Abbreviations are used to save time and space in writing recipes. Ability to use quantity recipes is dependent on knowledge of commonly used abbreviations. Abbreviations commonly used in food preparation are given below:

approximately = approx.
average = av. or avg.
bunch = bch.
bushel = bu.
calorie = Cal.
centimeter = cm.

milligram = mg.
mililiter = ml.
minute = min.
monosodium glutamate = M.S.G.
ounce = oz.
peck = pk.

cup = c.
cylinder = cyl.
deciliter = dl.
degrees Centigrade = °C
degrees Fahrenheit = °F
dozen = doz.
few grains = f.g.
fluid = fl.
gallon = gal.
gram = gm.
hectogram = hg.
hour = hr.
kilogram = kg.
large = lg. or lge.
liter = l.
pint = pt.
package = pkg.
pound = lb.
quart = qt.
second = sec.
small = S., sm., or sml.
speck = spk.,
square = sq.
tablespoon = T., tb., or tbsp.
teaspoon = t., ts., or tsp.
temperature = temp.
weight = wt.

Two additional abbreviations found in quantity food recipes are given below:

as purchased = A.P.–This means that the weight or measure should be taken without any preparation of the food. Example: flour unsifted, lettuce whole, eggs unshelled, etc.

edible portion = E.P.–This means that only part of the food normally eaten or used in cooking is being considered. Peanuts after being shelled, eggs out of shell, etc. Recipes generally specify any preparation an ingredient needs before it is used (i.e., sift, chop, mince, etc.).

SUBSTITUTIONS

Food service and dietary employees should become familiar with the substitutions commonly used in recipes. Substitutions may be made to reduce food cost, to save time, to increase food value, or to make use of surplus commodities. However, make no substitutions unless your supervisor says to do so.

Standard substitutions are listed below:

1 sq. chocolate	= 3 T. cocoa and 1 T. fat
1 c. cake or pastry flour	= 7/8 c. all-purpose flour
1 T. cornstarch	= 2 T. flour (for thickening)
1 t. baking powder	= 1/4 t. soda and 1/2 t. cream of tartar
1 c. milk	= 1/2 c. evaporated milk and 1/2 c. water = 1 c. reconstituted nonfat dry milk plus 2 t. fat
1 c. sour milk or buttermilk	= 1 c. fresh milk plus 1 T. vinegar or lemon juice (let stand 5 minutes)
1 c. sour milk and 1 t. soda in flour mixture	= 1 c. fresh milk plus 3 t. baking powder
1 T. corn syrup (in candy)	= 7/8 t. cream of tartar
1 c. butter	= 1 c. margarine or 7/8 c. fat plus 1/2 t. salt
1 whole egg	= 2 egg yolks or 2 T. dried whole egg plus 2 1/2 T. water
1 c. honey	= 1 to 1 1/4 c. sugar plus 1/4 c. liquid

EQUIVALENTS

The successful use of a recipe depends largely upon accuracy in measuring the ingredients. To be able to measure accurately, you should become familiar with the commonly used equivalents listed below:

3 t.	= 1 T.	= 15 milliliters	4 qt.	= 1 gal.	= 3.8 liters
16 T.	= 1 c.	= 240 milliliters	8 qt.	= 1 pk.	= 9 liters
1 T.	= 1/2 fl. oz.	= 15 milliters	4 pk.	= 1 bu.	= 35 liters
1 c.	= 8 fl. oz.	= 240 milliliters	16 oz.	= 1 lb.	= 454 grams
2 c.	= 1 pt.	= .480 liter	spk.	= less than 1/8 t.	= .50 milliliters
1 pt.	= 16 fl. oz.	= .480 liter			
2 pt.	= 1 qt.	= 0.95 liter = 950 milliliters	f.g.	= less than 1/8 t.	= .50 milliliters
1 pt.	= 32 fl. oz.	= 0.95 liter = 950 milliliters	pinch	= less than 1/8 t.	= .50 milliliters

CAN SIZES

When can sizes are used in recipes, it is important to use the correct size can or to make the appropriate substitution. Below are a list of common can sizes and their yields:

Can Size	Approximate Yield	Can Size	Approximate Yield
6 oz.	3/4 cups	No. 2 (18-20 oz.)	2 1/2 cups
8 oz.	1 cup	No. 2 1/2 (27-29 oz.)	3 1/2 cups
Picnic		32 oz.	4 cups
(10 1/2-12 oz.)	1 1/4 cups	No. 3 cyl.(51 fl. oz.)	5 3/4 cups
12 oz.	1 1/2 cups	46 fl. oz.	5 3/4 cups
No. 300 (13-16 oz.)	1 3/4 cups	No. 10	
No. 303 (16-17 oz.)	2 cups	(6 1/2-7 lb. 5 oz.)	12-13 cups

TERMINOLOGY

To be successful in quantity food preparation, food service and dietary employees must be able to understand terminology used in standard recipes. They must master certain food preparation terminology as well. Knowledge of food preparation terms provides a basis for interpreting directions used in recipes for beverages, meats, salads, vegetables, fruits, desserts, and pastries. Some terms are related to dishes native to other countries which have become popular in the United States. Other terms are of French origin. All food service employees should be alert to new food preparation terms. For those who aspire to become gourmet chefs, knowledge of the French language is a must.

ADJUSTING YIELD

Yield refers to the number of servings a recipe provides. Most standardized recipes for food service will yield 25, 50, or more servings. The yield of a recipe is usually stated on the recipe card.

To get a different number of servings than the recipe makes, you must adjust the recipe. To do this, you must increase or decrease each ingredient by the same proportion you wish to increase or decrease the recipe. For example, if the recipe you plan to use yields 50 servings, but you only want to serve 20 persons, you must decrease the recipe. To determine the amount to decrease each ingredient divide 20 (the number of persons to be served) by 50 (the number of servings in the original recipe.) The result is .40 or 40 percent. If you wanted to use the recipe yielding 50 servings to serve 70 persons, you would need to increase the recipe. To determine the amount to increase each ingredient divide 70 by 50. The result is 1.40 or 140 percent.

Next, you must determine the new amount of each ingredient. To make figuring easier when using recipes whose measures are expressed in pounds, cups, and tablespoons, convert each measurement in the recipe to the next smaller unit. This means convert pounds to ounces, cups to tablespoons, and tablespoons to teaspoons. (This step is omitted if the recipe uses metric measures.) Then multiply each amount by the amount of increase or decrease needed to get the desired yield.

To reduce or increase the yield of a recipe follow the four steps outlined below with each of the original recipe's ingredients.

STEP 1: Determine the proportion required to the number of serings yielded by the original recipe.

For example, to reduce a recipe serving 50 to one serving 20, divide the desired servings (20) by the original recipe's servings (50):

$$\frac{20 \text{ (number of servings desired)}}{50 \text{ (original number of servings)}} = .4 \text{ desired proportion}$$

STEP 2: Convert each unit of measure to the next smaller unit.

For example, if the recipe in STEP 1 above called for 2 lbs. of flour, reduce pounds to ounces.

16 oz. (number of ounces in a pound)
x 2 lbs. (number of pounds required to serve 50)
32 oz. (number of ounces needed to serve 50)

STEP 3: Determine the amount of the ingredient needed for the new recipe using the proportion determined in STEP 1 above.

For example, using the example in STEPs 1 and 2, 32 oz. would be multiplied by .4 to yield the amount of flour needed to serve 20:

32 oz. (number of ounces in 2 lbs., STEP 2)
x .4 (desired proportion, STEP 1)
12.8 oz. (number of ounces needed to yield 20 servings)

STEP 4: Convert the new amount (STEP 3) of each ingredient back to its original unit of measure.

For example, 2 lbs. started as pounds, but STEP 3 converted it to ounces. To convert back to pounds, divide 12.8 oz. by 16 ounces (1 pound).

$$\frac{\text{(produce from STEP 3) 12.8 oz.}}{\text{(1 pound) 16 oz.}} = .8 \text{ lb.}$$ number of pounds needed to yield 20 servings

In this example, if 2 lbs. of four are needed in a recipe yielding 50 servings, .8 lb. would be needed to yield 20 servings.

Example 2: To increase the recipe used in the previous example from 50 to 70 servings, follow the four STEPs.

STEP 1: $\frac{70}{50} = 1.4$

STEP 2: 16 oz.
x 2 lbs.
32 oz.

STEP 3: 32 oz.
x 1.4
44.8 oz.

STEP 4: $\frac{44.8 \text{ oz.}}{16 \text{ oz.}} = 2.67$ lbs.

Metric measure are a little easier to work with. STEPs 2 and 4 are eliminated. Only two STEPs are used.

For example, to reduce a recipe from 50 servings to 20 servings requires only two computations.

STEP 1: $\frac{20}{40} = .4$ and

STEP 2: .4
x .9 kg. metric equivalent to
.36 kg. 2 lbs.

In this example, if .9 kg. of flour is needed in a recipe yielding 50 servings, .36 kg. would be needed to yield 20 servings.

Recipe Use

Food preparation workers can develop speed and accuracy in recipe use by observing the following guidelines:

- Read the recipe carefully before beginning.
- Be sure you understand each term used.

- Estimate the time required for preparation of the product and plan so that the product will be finished at the proper time.
- Assemble all the ingredients.
- Make substitutions in ingredients only when told to do so.
- Measure or weigh exactly.
- Get out the necessary tools, utensils, and equipment or suitable substitutes before beginning.
- Arrange ingredients, tools, utensils, and equipment in order of use.
- Make all necessary pre-preparations, such as preheating the oven, washing and chopping vegetables, or greasing pans.
- Follow the directions exactly as given for best results.
- When in doubt, ask. Never guess.

COOKING METHODS

Five categories of cooking are used in food preparation: dry heat, moist heat, fat, combination, and extraction. ***Dry heat*** is used in baking, roasting, and broiling. Cakes, pies, breads, and beans are baked. Meat is roasted. Broiling involves the use of an open fire. ***Moist heat*** cookery involves the cooking of foods in liquids. Boiling, steaming, poaching, and pressure cooking are types of moist-heat cookery. Methods of browning in hot ***fat*** include sauteeing or flip frying, pan frying, griddle frying, deep frying, or pressure deep frying. The ***combination*** category involves exposing food to the first three methods of cookery in a sequence, or together in the same pot. Combination methods include stewing, braising, pot roasting, and fricasseeing. The fifth category, ***liquid food extracts***, uses by-products of foods which have been simmered in liquids. These liquids are called broth or stock. ***Broth*** is the liquid from cooked foods such as boiled chicken or boiled beef. ***Stock*** is liquid extracted from meat, fish, and vegetable leftovers. Broths and stocks are used to make soups, sauces, and gravies.

SEASONINGS

Seasonings are flavor adding ingredients. They add interest and variety. Because they are strong-flavored, only small amounts of most seasonings are needed. Salt and pepper are the best known seasonings. Seasonings include herbs, spices, salts, extracts, and condiments.

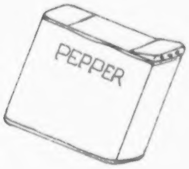
Herbs

An ***herb*** (URB) is any plant with a strong flavor and aroma that is used to season foods. You can learn to recognize the flavors of herbs by smelling and tasting small amounts. You can also try to identify the herbs used in the foods you eat. Herbs most frequently used in food preparation include the following:

anaise (ANN-us)
basil (BAZ-il)
bay leaf
caper (KAY-purr)
caraway
celery leaves
celery roots
celery seeds
chervil (SHUR-vil)
chives
cilantro (si-LAN-tro)
comino (CUH-me-no)
coriander (KOR-ee-AN-der)
cumin (CUH-min)
dill
fennel leaves
garlic
horseradish
hot pepper
leek
marjoram (MAR-jor-am)
mustard
onion
oregano (uh-REG-un-no)
parsley
peppermint
rosemary
saffron
sage
savory
scallion (SKAL-yon)
sesame seed
shallot (SHAL-ot)
spearmint
sweet pepper
tarragon
thyme (TIME)

Spices

Spices are taken from the seeds, stems, barks, fruits, roots, or leaves of plants and trees. They are very pungent, aromatic, and flavorful. Spices may be used whole or ground. Spices used in food preparation include the ones listed below:



allspice
black pepper
cardamom (CARD-uh-mum)
cayenne pepper (ki-YEN)
cinnamon
cassia (CASH-uh)
clove
ginger
mace
nutmeg
paprika (pap-REE-ka)
peppercorn
poppy seed
tumeric
white pepper

Several herb and spice mixtures are used in food preparations. The most common ones are chili powder, curry powder, and poultry seasoning.

Salts

Salt heightens the flavor of foods. It should be used sparingly in food preparation. Several types of salt are used in food preparation. ***Table salt*** is the most common type of salt. ***Sea salt***, a coarse natural salt, is sprinkled on pretzels, rolls, and breads before baking. Monosodium glutamate (GLUE-tuh-MATE) is used to intensify the flavor of foods, especially in Oriental cookery. ***Seasoned salt*** is a mixture of table salt, vegetable flavoring, spices, and monosodium glutamate. ***Smoked salts*** are flavored with hickory smoke or smoke from other scented woods.

Extracts

An ***extract*** is the concentrated flavor and aroma of an ingredient. Some extracts are preserved in alcohol. The most familiar extracts are vanilla, almond, lemon, orange, and peppermint.

Condiments

A ***condiment*** (CON-duh-munt) is a seasoning or relish. Familiar ones include mustard, catsup, and steak sauce. Other condiments include prepared horseradish, chili sauce, seafood cocktail sauce, Worcestershire, and soy sauce. Condiments are used in cooking as well as at the table.

Care and Storage

Spices, herbs, and extracts should be purchased in small quantities. Light and warmth cause herbs and spices to lose color, fragrance, and flavor. Keep them tightly covered in a cool, dark room. Extracts should be stored in dark bottles.

Tasting

Tasting foods is a means of quality control. Sauces, gravies, and vegetables can often be improved by adding more butter or margarine, salt, pepper, or other seasonings. In some restaurants, the cooks all line up to taste the food before the guests arrive. Each uses a tray of clean spoons and tastes each dish. A clean spoon should always be used for tasting. The cooking spoon should never be used for tasting.

Convenience Foods

A convenience food is any partially prepared food product or ingredient which saves production time. Although convenience foods may cost more than traditionally prepared foods, their cost is often offset by savings in labor, equipment, and energy costs. In addition, food waste can be almost entirely eliminated. Another advantage is that portion sizes can be standardized and the cost per portion more accurately determined.

Convenience foods are available in several forms: fresh, frozen, freeze-dried, dehydrated, and canned. Convenience foods are available for hors d'oeuvres, entrees, soups, sauces, vegetables, fruits, salads, and desserts. They may be packaged in quantity or in portion-size disposable containers. Some convenience foods need only reheating before being served. Sausage, gelatins, instant potatoes, and packaged pudding mixes are commonly used convenience foods. Other examples of convenience foods are cake and other baked-product mixes, frozen entrees, soups, gravy and sauce bases, and packaged individual portions of condiments and beverages.

The number of convenience foods used varies widely. Some food service establishments use only convenience foods, eliminating most food preparation. Other food service operations use convenience foods to eliminate steps in preparing some foods or to reduce food costs. They do not eliminate food preparation entirely. Some large restaurants prepare their own convenience foods, expecially mixes and foods which can be frozen. Large chain restaurants may prepare and distribute foods from a central commissary to individual restaurants.

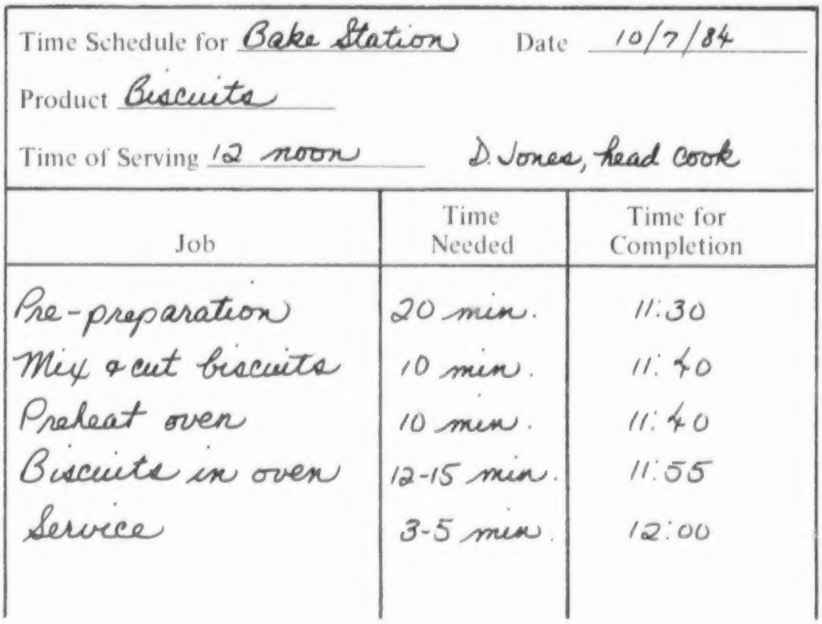
Work Simplification

Work simplification means doing a task in the easiest, simplest, and quickest way. Work simplification eliminates unnecessary steps and wasted motions. It also helps to prevent fatigue.

The efficiency of work in a food service facility is affected by several factors. These factors include arrangement of work stations (briefly discussed in this chapter), and equipment which is discussed in Chapter 11, Cold Storage, Serving, and Cleaning Equipment. Efficiency is also affected by time management and work motions.

TIME MANAGEMENT

Food service employees are usually provided with ***time schedules*** to let them know what is expected. The time schedule usually lists the tasks each employee is assigned for the day. The time normally required for each task and the time the task must be completed may also be included.



Time Schedule for Bake Station Date 10/7/84
Product Biscuits
Time of Serving 12 noon D. Jones, head cook

Job	Time Needed	Time for Completion
Pre-preparation	20 min.	11:30
Mix & cut biscuits	10 min.	11:40
Preheat oven	10 min.	11:40
Biscuits in oven	12-15 min.	11:55
Service	3-5 min.	12:00

To help control costs, the head cook may be responsible for completing a ***production schedule*** to be turned in to the general manager after preparation is completed. The production schedule usually shows the amount of food prepared, the expected yield, the actual yield, the number of servings, and the amount left. If too much of any food has been prepared, the manager can request less next time the food is served.

Station Bake Station
Biscuits

Workers B. Ray
E. MacDonald
R. Campbell

Manager D. Smith

Number of Servings Prepared	Menu Item	Expected Yield	Actual Yield	Number Served	Amount Left Over
25 persons	Biscuits	48	44	25	14
25 persons	Baked Custard	25	25	25	0

The workers in each station work as a team, each worker with a definite job. In the bake station, one worker might be mixing pie dough, another rolling it, and a third making the filling. In the salad station, one worker might be cleaning and peeling vegetables and fruits, another might be preparing vegetable salads, and another might be making gelatin salads. The head cook is in charge of the station, but it takes all workers working cooperatively to prepare quality food on schedule.

Timing is essential in food preparation. Food produced in large quantities, must be ready at serving time. Foods produced to order must be timed so that all items are ready at the same time. If service is delayed, if food is not served at the proper temperature, or if the food is not fresh, flavorful, and attractive, customers will be dissatisfied.

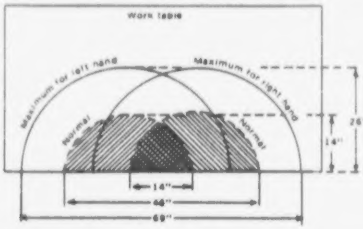
Workers are responsible for timing their own work to ensure customer satisfaction. Each food takes a different amount of time to prepare. Not only must time be allowed for cooking, but for preparation and finishing. For example, timing for cake making should include time for assembling ingredients, utensils, tools, and equipment; measuring ingredients; preheating the oven; baking; cooling the cake; frosting; and cleanup.

Timing also involves scheduling the use of equipment. Two persons cannot use the food mixer at once. Two items requiring different baking temperatures cannot be baked in the same oven at the same time. A schedule can eliminate confusion over who will be using a particular piece of equipment at a given time.

For the individual worker, the standardized recipe is an important aid in timing food preparation. It gives both a list of steps in preparation and the time required for cooking. By working back from serving time, the worker can estimate the amount of time required for each step, and thus determine the time to begin preparation.

WORK MOTIONS

Workers can increase their productivity by learning to make the most of every motion. Workers should be aware of the work areas in which they are the most productive. Food and equipment should be placed in these areas. Nothing should be outside the maximum reach area. There should be no unnecessary reaching. Equipment, utensils, and tools are placed so that work follows a logical order.



Productivity is increased by combining, rearranging, or eliminating work motions. Using the same tool for two motions saves time and energy. For example, use a sandwich spreading spatula with a cutting edge that permits both spreading and cutting. Repeating a single motion helps speed work. Slicing many slices of meat at once is faster than stopping to place each slice on a tray after cutting it. Small motions take less time and energy than large ones. Using one finger to turn on the mixer takes less energy than whipping cream by hand using a wire whip. Gravity can help do the work and handling of food can be reduced by using a chopping board near the edge of the sink and letting the chopped pieces fall into a container in the sink.

Motion economy is often achieved by using hands and arms more efficiently. Use both hands in unison or move arms at the same time whenever possible. When reaching to place a carton of milk and an empty glass on a tray, reach for the carton with one hand and for the glass with the other. Move arms simultaneously in opposite and symmetrical directions. When preparing a tray of salad plates, hold the plate in the left hand and put lettuce on the plate with the right hand. Use natural rhythm with continuous, curved motions. When washing a table top, use continuous, curved movements and avoid using straight-line movements that start and stop.

The food service supervisor or manager usually sets up the most efficient work method for each task. New employees are taught these methods. Workers must learn the proper way to hold and use equipment and to perform each task. Skilled workers can devise additional work simplification methods. Some general work simplification guides are listed below:

- plan ahead—think through all the steps in the task before beginning
- eliminate unnecessary steps or movements
- assemble all supplies before beginning work

- select the best tools for the job
- keep your mind on your work
- maintain good posture
- clean up as you work.

Food Portioning

Portioning refers to dividing food into servings of equal size. Portion is another word for serving. ***Standard portions*** ensure that everyone gets exactly the same size serving. This contributes to both cost control and customer satisfaction.

Decisions regarding portion size are influenced by the type of meal, food choices, serving methods, kinds of customers, dietary needs, and cost of food and supplies. Portion size may also be influenced by local customs. Portions in health care facilities are determined by the dietary needs of the patient.

Portion control refers to the techniques used to ensure standard size servings. Portion control may be achieved in different ways for different foods. It may be achieved at the point of purchase. For example, purchase 4 ounce hamburger patties, sliced bread, or a pre-portioned frozen entree for 20. Portioning may be achieved during food preparation by weighing dough for rolls, using a scoop to measure sandwich filling, using a standard size pan for a cake, or using individual custard cups for baked custard. It may be achieved when foods are served. Using a standard scoop ensures standard servings of foods like mashed potatoes and ice cream. Markers can be used to obtain uniform servings of pies and cakes. Prepackaged portions of sugar, ketchup, mayonnaise, salt, pepper, crackers, cereal, milk, and ice cream are frequently used in food service.

Plating Food

Servings should be the exact size specified. Serving extra food or failure to use the proper size dipper or ladle specified for the food can cost the food service facility money and result in decreased profits. Serving less than the specified amount can result in dissatisfied customers and wasted food. Serving the wrong amounts to patients may be harmful to their health. Indifference toward cost control can cost you your job.

In addition to serving specified portions, attention must be given to the appearance of food on the plate. First, be sure to use the correct size dish or plate. A large amount of food on a small plate may appear sloppy; a small amount of food on a large plate appears inadequate. Do not let foods run together on the plate. Be sure that bread is not placed where it will soak up juice from vegetables. Do not place foods that melt, such as butter or jello, near hot foods. The appearance of food is often improved by the addition of a colorful garnish. Be sure to add the appropriate garnish as directed.

Garnishing

A ***garnish*** is a food used to decorate another food. Garnishes may range from simple to elaborate, but simple ones are usually best. A garnish should never overpower the food with which it is served.

Garnishes should be colorful. They may be yellow, orange, red, green, white, brown, tan, or black. Natural colors are more appealing than artifical ones. The garnish should contrast, but not clash, in color with the food being decorated. A strawberry might garnish a fruit salad. Sliced hard-cooked eggs would add color to a meat salad. A sprig of parsley would add color to a plate of roast beef.

The flavor of the garnish should be compatible with the food. A red cherry would contrast in color with a vegetable salad, but the flavors are not compatible. A cherry tomato would be a better choice.

The addition of garnishes should be carefully planned. Garnishes cost money and must be considered as part of the food cost. They take time to prepare and must be considered in planning the production schedule. Directions for garnishing foods are usually provided in the standard recipes used in food service.

When garnishing foods, use fresh garnishes of high quality. There is nothing attractive about wilted parsley or dried lemon wedges. Balance the placement of garnishes. Do not place them all in one spot. Use them to add height to the plate. Odd numbers are usually more pleasing. For example, three lemon slices on a platter of fish are more interesting than four. If the garnish is a different temperature than the food, "protect" the garnish to keep it at the correct temperature. For example, place cranberry jelly on a candied apple ring or mint jelly on an orange slice to keep the jelly from melting on a hot plate. Avoid using toothpicks in garnishes unless they can be seen easily.

Points To Remember

- Standard recipes are formulas which help to maintain quality and cost control in quantity food production. Standard recipes list ingredients, utensils and tools, directions, cooking information, yield, and number of servings. It is important to understand the terminology used in standard recipes.
- Abbreviations are used to save time and space in writing recipes.
- Substitutions in ingredients may be made to reduce food cost, to save time, to increase food value, or to make use of surplus commodities.
- Equivalent measures aid in measuring ingredients accurately.
- When can sizes are used in recipes, it is important to use the correct size can or to make the appropriate substitution.

- Terminology used in food service needs to be understood.
- The yield, or number of servings, can be adjusted by increasing or decreasing the amount of each ingredient by a set factor or amount.
- Speed and accuracy in recipe use can be developed by observing basic guidelines. These guidelines include reading the recipe before beginning, estimating the time needed for preparation, assembling ingredients, getting out equipment needed, arranging ingredients and equipment in order of use, making pre-preparations, and following directions.
- The five categories of cooking used in food preparation are dry heat, moist heat, cooking in fat, combination method, and liquid food extracts.
- Seasonings are ingredients that add extra flavor to foods. They include herbs, spices, salts, extracts, and condiments.
- Tasting during food preparation should be done with a clean spoon each time the food is tasted.
- A convenience food is any partially prepared food product or ingredient which saves production time. Convenience foods may be fresh, frozen, freeze-dried, dehydrated, or canned. They are available for hors d'oeuvres, entrees, soups, sauces, vegetables, fruits, salads, and desserts.
- Work simplification means doing a task in the easiest, simplest, and quickest way. Work simplification eliminates unnecessary steps and wasted motions. It also helps to prevent fatigue.
- Each food service facility is divided into work centers called stations. Typical stations include beverage, cold, hot, bake, and serving stations. The number and types of stations depend on the menu, the type of service, and the size of the kitchen. The placement of the work stations is determined by the flow of both the food and the service. Within a station, the work flow is usually from left to right.
- Time is managed in the food service facility through use of time schedules, production schedules, and timing of tasks by individual workers.
- Productivity is increased by combining, rearranging, or eliminating work motions. Most motions should be made within the normal work area or area of comfortable reach. Motion economy is often achieved by using hands and arms more efficiently.
- Portioning refers to dividing food into servings of equal size. Portion is another word for serving. Standard portions ensure that everyone gets exactly the same size serving. Portion control refers to the techniques used to ensure standard size servings.

- When food is served, portions should be the exact size specified. The correct size plate or dish should be used. Attention should be given to the appearance of the food on the plate.

- A garnish is a food used to decorate another food. A garnish should usually be simple. It should contrast in color, but be compatible in flavor, with the food it decorates. Garnishes should be of high quality, placed attractively, and kept at the proper temperature.

Words To Know

as purchased
broth
combination (cooking method)
condiment
dry heat
edible portion
extract
fat
garnish
herb
ingredients
liquid food extracts
lukewarm
moist heat
portion
portion control
portioning
production schedule
recipe
salt
sea salt
seasoned salt
seasonings
smoked salts
spices
standard portions
standard (recipe)
stock
table salt
time schedules
work simplification
yield

Questions For Review

1. What is a standard recipe?

2. What information should a standard recipe include?

3. What is the word for each of the following abbreviations?

approx. =
avg. =
Cal. =
c. =
mg. =
qt. =
tbsp. =
ml. =
min. =
oz. =
pt. =
lb. =
sec. =
t. =
°F =
doz. =
fl. =
gal. =
hr. =
sq. =
temp. =

4. What is the standard substitution for each of the following ingredients?

1 sq. chocolate =
1 c cake flour =
1 T. cornstarch =
1 t. baking powder =
1 c. milk =
1 c. sour milk =

1 c. sour milk and
1 t. soda in flour
mixture =
1 T. corn syrup
(in candy) =
1 c butter =
1 whole egg =
1 c honey =

5. What is the approximate yield of each of the following can sizes?
6 oz. =
8 oz. =
Picnic =
12 oz. =
No. 300 =
No. 303 =
No. 2 =
No. 2 1/2 =
32 oz. =
No. 3 cyl. =
46 fl. oz. =
No. 10 =

6. Describe the procedure for adjusting the yield of a recipe.

7. List eight guidelines for using a recipe.

8. Name and give examples of the five categories of cooking.

9. What are the five major types of seasonings?

10. Describe the sanitary procedure for tasting foods during preparation.

11. Why are convenience foods used in food service?

12. In what forms are convenience foods available? For what menu items?

13. What is work simplification?

14. What are some ways time is managed in a food service operation?

15. How can food service workers make the most of their work motions?

16. Define the following words about food portioning.
portion
standard portion
portioning
portion control

17. What are some guidelines for plating food?

18. What is a garnish? What are some guidelines for garnishing food?

14

Chapter Fourteen Beverages

COMPETENCY TO DEVELOP

- Prepare a variety of non-alcoholic beverages.

OBJECTIVES TO ACHIEVE

- Identify types and forms of beverages frequently prepared in food service.
- Describe menu uses of various beverages.
- Outline steps in preparing various beverages.
- Identify quality standards for specific beverages.
- Describe procedures for serving and garnishing various beverages.
- Describe procedures for holding and storing beverages.

Food service establishments may serve a variety of beverages. The most frequently prepared beverages are coffee and tea. Cocoa and hot chocolate are also available in most food service establishments. Some popular beverages require no preparation. These include milk, fruit juices, vegetable juices, and carbonated beverages. Fountain specialties like shakes and malts may also be served. Many food service establishments serve alcoholic beverages, which may be served *only* by persons who meet minimum age requirements. The ***beverage station***, where both hot and cold beverages are prepared, may be located in or near the cold food or pantry station. Some establishments locate several beverage pick-up stations in the dining area as well. Use of several beverage pick-up stations provide service personnel with quick access to beverages.

Beverages are served before, with, or after a meal according to the customer's wishes. In the United States, many restaurants, providing seated service, serve iced water as soon as customers are seated. At breakfast, coffee may be served immediately as well. Establishments which serve alcoholic beverages offer cocktails or wine before lunch and dinner. Coffee is frequently served as an after dinner drink, as are some alcoholic beverages. Coffee and fountain drinks may be served alone or with a snack. Preparation of quality beverages is not difficult if you remember a few basic guidelines: (1) start with quality ingredients; (2) follow the procedures provided exactly; (3) keep beverage equipment immaculate; (4) serve beverages immediately after they are made; (5) avoid lengthy holding or reheating of hot beverages.

Iced Water

Iced water is usually the first thing served to the customer in a seated service restaurant. The iced water often influences the customer's first impression of the restaurant. There is no excuse for serving tepid, cloudy water.

To prepare iced water, begin with chilled glasses, if possible. Add ice cubes or crushed ice using tongs or a scoop. *Never* dip the glass into the ice machine to fill. The glass could be chipped or broken, creating a health hazard, and necessitating disposal of the ice and cleaning of the machine to remove the broken glass. Iced water can be added from a pitcher containing ice and water at the customer's table, or the glass can be filled from an ice water dispenser and served from a tray. Keep a pitcher containing ice and water handy for refilling water glasses as needed. Some restaurants garnish ice water with a twist of lemon, lime, or a sprig of mint.

Coffee

Americans drink more coffee than any other beverage. Because of its popularity, the quality and quantity of coffee served often influences judgments of the food service establishment. Coffee may be either brewed or instant.

BREWED COFFEE

Brewed coffee is made from ground roasted coffee beans and water. Each method of brewing requires a specific grind for best results. If the ground coffee is too coarse, the coffee will be weak; if it is too fine, the coffee will be murky. The quality of water also influences the taste of the coffee. The water should be slightly hard and not artificially softened. Water with an undesirable taste or which is high in chlorine or iron should be filtered through ***activated charcoal***. Activated charcoal is specially treated to remove sediment, undesirable tastes, and odors from water.

Coffee is made in electric urns or brewers. The equipment used to make coffee must be absolutely clean. Coffee contains an oil that collects inside the containers giving the coffee a bitter taste. Daily cleaning will prevent off-flavors and odors.

To make good coffee by the brewing method, follow these directions:

- Use only clean equipment.
- Use a clean coffee ~~filter~~ or bag.
- Use only fresh coffee.

- Use the correct amounts of coffee and water.
- Use the correct temperature of water.
- Brew as directed.
- Remove grounds immediately.
- Serve only fresh coffee.

Coffee should be held only a short time. After the first ten minutes the flavor and fragrance of the coffee deteriorate, until the quality becomes unacceptable. For this reason, it is wise to make coffee frequently and in small amounts.

INSTANT COFFEE

Instant coffee, often decaffeinated, is served in individual packages. It may be mixed with hot water in a cup or pot, or it may be served in the package with a cup or pot of hot water.

SERVICE OF COFFEE

Coffee is served black (with nothing added), or with cream and/or sugar as desired by the customer. The cup may be preheated by rinsing with hot water. Frequent refills ensure that the coffee is kept hot.

Tea

The popularity of hot tea is increasing in the United States. Iced tea is already well-liked, especially during the summer months. Tea may be prepared from loose tea, tea bags, or instant tea. It may be made either by the pot or the cup.

MAKING TEA

Tea is ***steeped***. This means that the tea leaves are soaked in almost-boiling water for a short time to extract the tea flavor. All that is needed to prepare good tea is high grade tea, freshly boiled water, and a pre-heated pot.

To make hot tea, (1) rinse the pot with boiling water, (2) place either tea bags or bulk tea tied loosely in a bag in the pot, (3) fill the pot with freshly boiled (hot, not boiling) water, (4) steep for three minutes, (5) remove the tea, (6) preheat the tea cups with boiling water, (7) serve immediately.

To make iced tea use one of the following three methods: (1) prepare hot tea steeped 4-6 minutes at two to three times its usual strength and pour over ice, (2) pour hot tea concentrate into cold water, or (3), the most popular and easiest method, mix instant tea in cold water. This last method saves ice since the tea is already cool when it is poured over ice. Do not refrigerate iced tea prior to service. Cloudiness develops in iced tea that is refrigerated.

SERVICE OF TEA

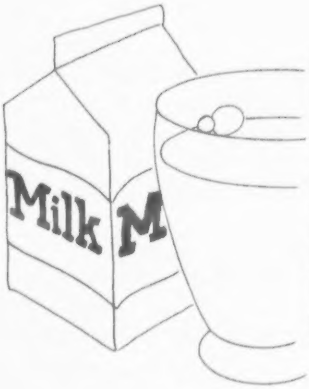
Another alternative for serving hot tea is to serve a tea bag alongside a pot of hot water. This may result in a tepid cup of tea with no flavor. The method described on the previous page is preferable. An extra pot of hot water can be served so the customer can dilute the tea, if desired.

Hot tea may be served with lemon and sugar, or milk and sugar as the customer desires. Iced tea is usually served with lemon and sugar.

Dairy Beverages

Protein-based beverages include milk, cocoa, and chocolate shakes and malts. They are made of milk, eggs, ice cream, and similar products.

MILK



Several kinds of milk are served as beverages. ***Whole milk*** contains all the natural butterfat found in milk. ***Skim milk*** contains less than one percent butterfat. To replace the vitamins removed with the butterfat, it may be fortified with Vitamin A and Vitamin D. Either whole or skim milk may be homogenized. ***Homogenized milk*** has been treated mechanically so that the butterfat is scattered evenly throughout the milk. The butterfat will no longer rise to the top as it does in whole milk. ***Chocolate milk*** and ***chocolate drink*** differ only in the amount of butterfat. Chocolate milk has as much butterfat as whole milk. Chocolate drink has much less. ***Buttermilk*** is a fermented milk with a sharp, slightly acid taste. It usually has flecks of butter throughout.

SERVICE OF MILK

Milk should be refrigerated until served. It should be served very cold. And, if at all possible, it should be served in its original container.

HOT CHOCOLATE AND COCOA

Hot chocolate and cocoa are especially popular in the winter months. They may either be cooked or prepared from a packaged mix.

To cook hot cocoa, combine cocoa with sugar and enough water to form a thin paste. Cook until thick and glossy. Add the cooked mixture to hot milk, stirring briskly with a wire whisk or spoon. If the cocoa will not be served at once, make it in a double boiler so it may be kept hot without scorching.

To use individually packaged mixes of chocolate or cocoa, pour the mix into a cup or individual pot. Add hot water and mix well.

SERVICE OF HOT CHOCOLATE AND COCOA

Hot chocolate and cocoa should be served very hot, preferably in preheated cups. A spoonful of whipped cream, a marshmallow, shaved chocolate, or a cinnamon stick may be used as a garnish.

MILK SHAKES

Milk shakes and malts are favorite fast food items. Most milk shakes in fast food establishments are prepared in an automatic dispenser. Syrup is added automatically or by hand depending on the type of dispenser. Malt may be added to make a malted milk shake. The key to quality control when using an automatic dispenser is to follow the manufacturer's directions exactly. Be especially careful to follow the daily start-up routine outlined in the operator's manual. When the machine is ready for operation, draw a sample shake. Check it for consistency, flavor, and color. Make any necessary adjustments. Always be sure to use the correct cup size. Fill the cup only to the fill line. The ***fill line*** is a line near the top of the cup which ensures that all shakes are the same size.

For milk shakes made to order, a blender is used. It is more difficult to achieve consistent quality when shakes are made in a blender. Ingredients can be measured more accurately in an automatic dispenser than in a blender.

SERVICE OF MILK SHAKES

Milk shakes are usually served with a straw and a long spoon. In fast food establishments, shakes "to go" are covered with a plastic cap.

Fruit And Vegetable Beverages

Fruit and vegetable juices are served as breakfast beverages and as appetizer cocktails. Tomato, orange, grape, and grapefruit juice are popular breakfast beverages. Non-alcoholic appetizer ***cocktails*** may be either fruit juice or vegetable juice or a combination of juices. Combinations of fruit juices are usually called ***punch***. Sometimes carbonated beverages such as soda or gingerale are added to punch. Tomato juice cocktails are made by adding a dash of Worcestershire or hot pepper sauce to tomato juice. Fruit punches are often made from a mixture of orange juice, grape juice, or pineapple juice and strong tea, gingerale, gelatin, or sherbet.

Fruit and vegetable juices should be served in small, well-chilled glasses. The juice should be ice-cold. A garnish may be used for added interest. Celery sticks may be used to garnish tomato juice. Mint leaves, lemon or lime slices or wedges, and strawberries are frequently used to make fruit juices more appealing.

Carbonated Beverages

Carbonated beverages (soft drinks) are extremely popular in the United States. These beverages are usually drawn from an automatic dispenser which contains flavor syrup and carbonated water. Soft drinks are usually sold in three sizes: small (12 oz.), medium (16 oz.), and large (24 oz.). When preparing soft drinks, fill the cup or glass half full with ice. Tilt the cup when dispensing to reduce foaming. Cover "to go" beverages with a plastic lid. If orders for more than one flavor are filled at once, mark each lid with the drink's flavor using a grease pencil. Serve with a drinking straw.

Points To Remember

- Food service establishments may serve a variety of beverages including coffee, tea, cocoa, hot chocolate, milk, fruit juices, vegetable juices, carbonated beverages, shakes, malts, and alcoholic beverages.
- Drinks have many menu uses. For example, water is often used as a before meal introduction; coffee, or an alcoholic beverage, are frequently served as after dinner drinks.
- Preparation of quality beverages is not difficult if you remember a few basic guidelines: (1) start with quality ingredients; (2) follow the procedures provided exactly; (3) keep beverage equipment immaculate; (4) serve beverages immediately after they are made; (5) avoid lengthy holding or reheating of hot beverages.
- Coffee, the most popular drink in the U.S., may be either brewed or instant. Brewed coffee is made from ground roasted coffee beans and water. Instant coffee, often decaffeinated, is served in individual packages. Coffee is served with cream and sugar as desired by the customer.
- Tea may be served hot or cold and is prepared from loose tea, tea bags, or instant tea. Tea may be made by the pot or the cup and is steeped to extract the flavor.
- Whole milk, homogenized milk, skim milk, chocolate milk, chocolate drink, and buttermilk can be served as beverages. Milk should be served very cold and if at all possible in its original container.
- Hot chocolate and cocoa are popular in the winter months and may be either cooked or prepared from a packaged mix.
- Most milk shakes and malts prepared in fast food establishments are prepared in an automatic dispenser. Milk shakes made to order are made in the blender. Milk shakes are usually served with a straw and a spoon.
- Fruit and vegetable juices are served as breakfast beverages and as appetizer cocktails. Combinations of fruit juices are usually called punch. Fruit and vegetable juices should be served ice-cold in small, well-chilled glasses. Garnishes may be added for interest.

- Carbonated beverages are usually drawn from an automatic dispenser which contains flavor syrup and carbonated water.
- Cold drinks, like milk, should be stored and served cold. Hot drinks, like coffee and tea, should be kept hot and not stored or reheated.

Words To Know

activated charcoal
beverage station
brewed coffee
buttermilk
chocolate drink
chocolate milk
cocktails
fill line
homogenized milk
punch
skim milk
steeped
whole milk

Questions For Review

1. Name three beverages that might be served in a food service establishment.
2. Name five basic guidelines to follow in the preparation of quality beverages.
3. Name and describe the two methods of making coffee.
4. List two things to remember when serving coffee.
5. List, in order, the steps for making hot and iced tea.
6. List and describe three types of milk.
7. What two ways can hot chocolate and cocoa be prepared?
8. Why is consistency easier to achieve in milk shakes from an automatic dispenser rather than a blender?
9. What is the difference between non-alcoholic appetizer cocktails and punch?
10. Name two garnishes used to make fruit juices more appealing.
11. In what three sizes are carbonated beverages usually sold? (include ounces)
12. What can you do when dispensing carbonated beverages to reduce foaming?
13. Name two important things to remember when serving "to go" beverages.

15

Chapter Fifteen
Cold Sandwiches

COMPETENCY TO DEVELOP

- Prepare hot and cold sandwiches.

OBJECTIVES TO ACHIEVE

- Identify types of cold sandwiches.
- Identify ingredients used in making cold sandwiches.
- Describe methods for preparing cold sandwiches.
- Describe ways to garnish and serve cold sandwiches.
- Outline procedures for holding and storing cold sandwiches.

Sandwiches are one of the most popular foods sold in food service. They are sold at sandwich counters, in vending machines, in fast food establishments, and in seated-service restaurants. Sandwiches are especially popular at lunch, but are also eaten for dinner and snacks. Breakfast sandwiches have recently gained popularity.

Sandwiches are quick, filling, and easy to eat. They may be hearty enough to be a meal or snack by themselves, or they may be served with other foods such as French fries, vegetables, or salads to complete a nutritious meal. Small sandwiches may be used as appetizers or party refreshments.

Types of Sandwiches

The types of sandwiches differ mostly in the number of slices of bread each use. The three most common types of sandwiches are regular, open-faced, and Club or decker.

- ***Regular sandwiches*** are made with *two* slices of bread. Small regular sandwiches may be called ***tea sandwiches***.
- ***Open-faced sandwiches*** have only *one* slice of bread. Very small open-faced sandwiches are called ***canapes*** (KAN uh pe).
- ***Club or decker sandwiches*** have at least *three* slices of bread.

Specialty sandwiches are usually made with a special bread such as a hot dog bun, a hamburger bun, an English muffin, a bagel (BA guhl), a croissant (Krwa SAN), a hard or soft roll, or pita (pocket) bread. Examples of specialty sandwiches include submarine (poor boy, hoagie), croissant, and pocket sandwiches.

Parts of Sandwiches

Most sandwiches include three parts: bread, spread, and filling.

BREAD

Bread for sandwiches may be either ***yeast*** or ***quick*** bread. White yeast bread is the most popular sandwich bread. Other popular yeast breads include ***whole wheat***, ***rye*** (both light and dark), and ***pumpernickel*** (PUM puhr NIC uhl). Soft yeast rolls are used for hot dogs and hamburgers. Crusty yeast rolls are often used for specialty sandwiches as are special breads such as ***croissants***.

Quick breads popular for sandwiches include Boston brown bread, nut bread, and fruit bread. Quick breads are especially popular for sweet sandwiches. Dainty tea sandwiches made with quick breads are frequently served with a sweet salad for lunch.

To make good sandwiches, bread must have several characteristics:

- It must be neither too fresh, nor too old (***stale***). Day-old bread is best. Fresh bread may tear when spread with filling or the sandwich may become soggy. Stale bread is dry and often has an off-flavor.
- It should be cold. Bread that has been refrigerated is easier to spread.
- It should have a uniform shape. Each slice should be the same size and shape.
- It should have a firm, velvety texture. It should not crumb or tear easily.

SPREAD

A ***spread*** is a thin coating used on one side of the sandwich bread. The spread helps seal the surface of the bread to prevent the sandwich filling from soaking into the bread. It helps keep the bread from drying out. It adds flavor to the sandwich. Sometimes a spread is used alone, especially for canapes.

The most common spreads are butter, margarine, and mayonnaise. Butter and margarine are the best choices for sandwiches held in advance of serving. Mayonnaise should be spread on the bread as close to serving time as possible so that the bread will not become soggy. Other spreads include cream cheese, spiced butter, peanut butter, and mustard.

Butter, margarine, or mayonnaise may be used alone, or blended with other ingredients. Additional flavor may be added by mixing one of these spreads with sauces like mustard, catsup, or chili sauce. Minced onions, garlic, horseradish, pickles, fish, or ham also add flavor to sauces.

FILLING

The sandwich ***filling*** is the ingredient (or ingredients) placed between the slices of bread, or on the bread of an open-faced sandwich. The sandwich is often named for its filling. Chicken salad, salami, and cheese are examples of these sandwich fillings.

Sandwich fillings may be dry or moist. ***Dry fillings*** include thin slices of meat, poultry, fish, or cheese. A thin slice of tomato or onion, sliced pickles, and a lettuce leaf may be placed on top of the meat or cheese.

Moist fillings are made from finely chopped meat, chicken, turkey, fish, or cheese. Chopped celery, onion, cucumber, pickles, or nuts may be added for texture. Moist fillings are usually held together with mayonnaise. Moist fillings include chicken salad, ham salad, and tuna salad. Lettuce may be placed under the top slice of bread.

Special precautions must be taken when preparing, holding, and serving moist fillings. The filling should be mixed under sanitary conditions. It should be refrigerated until ready to use. Moist fillings should not stand at room temperature for more than three hours. Only the amount of filling should be removed from the refrigerator that can be used promptly. These precautions should prevent ***salmonella*** (SAL muh NEL uh) ***contamination***. Salmonella is a toxic bacteria which can make people very sick.

Sandwich Preparation

Preparation of sandwiches involves two main steps: preparing the parts of the sandwich and assembling the sandwich.

PREPARING SANDWICH PARTS

All sandwich ingredients should be prepared and chilled before making the sandwiches. Refrigerate the bread for 24 hours before using. For moist sandwiches, prepare and refrigerate the filling in advance. Soften butter and prepare spreads. Slice the meat and cheese for dry sandwiches. Wash, drain, and tear the lettuce to the correct size. Also prepare any garnishes and accompaniments.

ASSEMBLING THE SANDWICH

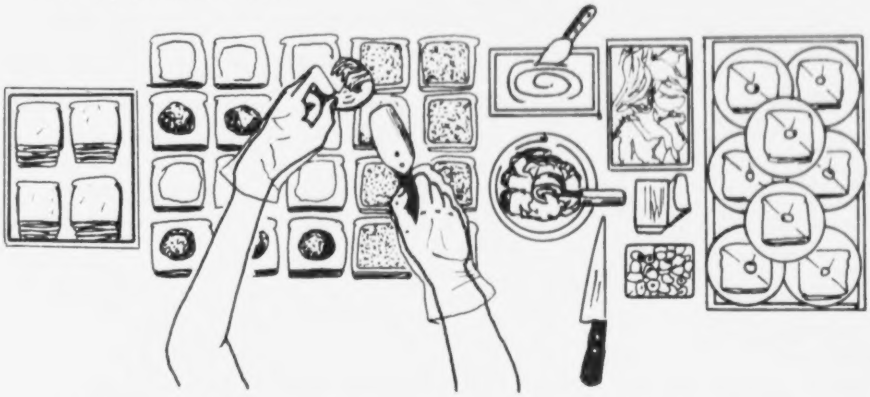
Whether sandwiches are to be prepared one-at-a-time on order or in quantity, a well-organized and equipped sandwich preparation center is essential. Before sandwiches are assembled, the work area must be organized. First, assemble all needed tools and utensils. Include the following:

- trays
- containers
- knives
- spatulas
- scoops
- plastic gloves
- sandwich wraps
- toothpicks

Next, get out the prepared, chilled ingredients. You will need bread, softened spreads, fillings, and garnishes. Slit bread wrappers containing the bread loaves in the center (lengthwise) with a sharp knife. Get out only the amounts of ingredients that can be used promptly.

Arrange the tools, utensils, and ingredients for maximum efficiency. A right-handed worker should arrange items so the flow of work is from left to right. For a left-handed worker the flow should be from right to left.

The work area may be arranged for one worker or for several workers. When several workers help assemble sandwiches, the work is done in a ***production line***. Each worker does certain tasks. The illustrations below show how the work area might be arranged for one worker and for a production line.



When making a sandwich with a moist filling to be served in the dining room, use the following procedure (for a right-handed person):

STEP	**HAND(S)**
1. Take top slices of bread from two bread stacks.	Both hands
2. Place spread on both slices of bread, using a spatula.	Right hand
3. Measure one scoop of moist filling. Place in center of bread slice on right.	Right hand
4. Spread filling evenly to edges of bread, using spatula.	Right hand
5. Cover filling with lettuce leaf.	Right hand

6. Cover with other slice of bread.	Left hand
7. Cut sandwich diagonally using a sawing motion.	Right hand
8. Move plate to center.	Left hand
9. Place sandwich on plate.	Both hands
10. Add garnish and accompaniments.	Both hands

To make a sandwich with a dry filling, follow the same procedure, except alternate hands for each different ingredient used in the filling.

One worker can make sandwiches in quantity using basically the same setup. To do so, follow the procedure below (for a right-handed person):

TASK	**HAND(S)**
1. Lay out 20 slices of bread, five slices across each row, four rows down.	Both hands
2. Beginning with the slice on the right far corner, place spread on bread using one continuous C-shaped motion for each slice.	Right hand
3. Place a scoop of filling on the bread in every other row beginning with the row nearest to you.	Right hand
4. Spread the filling with the spatula, using the same motion as for the spread.	Right hand
5. Place lettuce on top of the spread filling on each sandwich.	Left hand
6. Working from top to bottom, cover each sandwich with the plain piece of bread.	Both hands
7. Place sandwiches in the top row on top of sandwiches in the first row.	Both hands
8. Cut sandwiches diagonally using a sawing motion.	Right hand
9. Place sandwiches on a tray.	Both hands

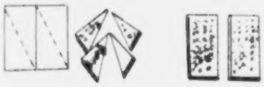
When making sandwiches in quantity, two or more workers can form a production line for assembling the sandwich parts. When this is done, the steps might be divided as follows:

- The first worker spreads the first slice of bread and adds the filling.

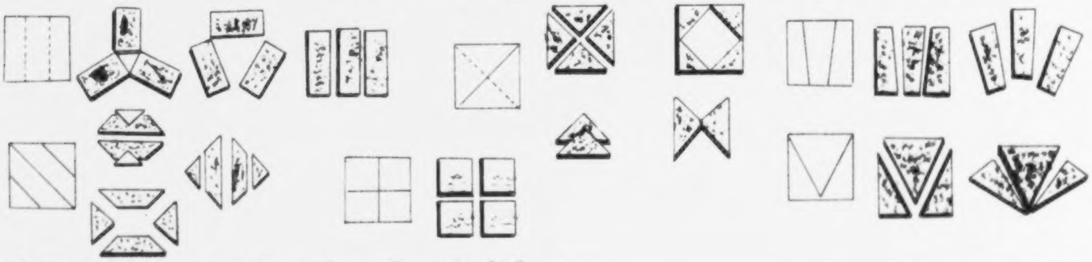
- The second worker adds lettuce, spreads the top slice of bread, and adds the top slice to the sandwich.
- The third worker, if needed, cuts, garnishes, and wraps the sandwiches.

The organization of the work area would be about the same. However, a larger work area would be needed for two or three workers. Facilities which frequently make sandwiches in quantity may use a slow-moving continuous belt to move the sandwiches from one worker to the next.

CUTTING SANDWICHES



Sandwiches may be cut in a variety of shapes. The cut sandwiches should be arranged attractively on the serving plate. Ways to cut sandwiches and arrange them in an eye-appealing manner are shown below.



Garnishing and Serving Sandwiches

A variety of edible garnishes may be used on sandwiches. The garnish should be suitable in texture, form, color, and flavor. Garnishes frequently used with sandwiches include parsley, lettuce, tomato slices, celery, carrot sticks, green pepper, cucumber slices, radishes, egg slices, pickles, olives, and relishes. For sweet sandwiches, apricot halves or pineapple sticks or rings might be used.

Regular sandwiches are garnished simply. The garnish may be held on top of a sandwich by a toothpick, or placed to the side. Open-faced sandwiches require more elaborate garnishes. Stuffed sliced olives, chopped bacon, green pepper strips, radish roses, or carrot curls may be used as garnishes on open-faced sandwiches.

Sandwiches should be served attractively. Garnishes may fill the empty space on the plate, making the sandwich more appetizing. In addition, cold sandwiches are frequently served with French fries, potato chips, potato salad, cole slaw, sauerkraut, stuffed eggs, or sliced tomatoes.

Holding and Storing Cold Sandwiches

Wrap sandwiches in moisture-proof wrapping, place in sandwich bags, or cover pans or trays with moisture-proof wrapping and a damp towel. Label sandwiches for easy identification. Refrigerate sandwiches which are not to be used immediately.

Points To Remember

- Sandwiches can be eaten at any meal. They are quick, filling, easy to eat, and sold in all types of food service establishments.
- The three most common types of sandwiches are regular, open-faced, and club or decker. Regular sandwiches have two slices of bread; open-faced sandwiches have one slice of bread; and club or decker have at least three slices of bread.
- All sandwiches include three parts: bread, spread, and filling.
- Bread for sandwiches may be either yeast or quick bread. Yeast breads include white, whole wheat, rye, and pumpernickel. Quick breads include Boston brown bread, nut bread, and fruit bread.
- To make good sandwiches, day-old bread is best. Bread should be cold and should have uniform shape and a firm, velvety texture.
- A spread is a thin coating used on one side of the sandwich bread. Spreads may include butter, margarine, mayonnaise, cream cheese, spiced butter, peanut butter, and mustard.
- The sandwich filling is the ingredient (or ingredients) placed between or on the slice(s) of bread. Fillings may be dry (such as meat, cheese, or lettuce), or moist (such as chicken or tuna salad).
- Special precautions must be taken when preparing, holding, and serving moist fillings, to prevent salmonella contamination.
- Preparation of sandwiches involves two main steps: preparing the parts of the sandwich and assembling the sandwich.
- Tools, utensils, and ingredients should be arranged for maximum efficiency for a right- or left-handed worker. The work area may be arranged for one worker or for several workers. The organization of the work area would be about the same in either case. However, a larger work area would be needed for two or three workers.
- Sandwiches may be cut in a variety of shapes and should be served attractively.
- A variety of edible garnishes may be used on sandwiches. The garnish should be suitable in texture, form, color, and flavor.
- When holding or storing cold sandwiches, they should be placed in a moisture sealed wrap or container, labelled, and, if they are not to be served immediately, refrigerated.

Words To Know

canapes
club sandwiches
croissants
decker sandwiches

quick bread
regualr sandwiches
rye bread
salmonella contamination

dry filling
filling
moist filling
open-faced sandwiches
production line
pumpernickel
specialty sandwiches
spread
stale
tea sandwiches
whole wheat bread
yeast bread

Questions For Review

1. Name and describe the three most common types of sandwiches. Give two examples of speciality sandwiches.
2. Name the three parts of a sandwich.
3. List two examples of yeast bread.
4. List two examples of quick bread.
5. Name four characteristics that bread must have in order to make good sandwiches.
6. What is one purpose for using a spread on a sandwich?
7. Explain the difference between moist and dry fillings and give an example of each.
8. List two procedures for preparing sandwich parts.
9. List four tools or utensils needed at a sandwich preparation center.
10. Explain the difference in work flow for a right- and left-handed worker.
11. What steps are different when preparing sandwiches with a moist rather than a dry filling?
12. How does forming a production line for assembling sandwich parts differ from having one worker doing the job?
13. List three types of garnishes used when making sandwiches and explain how garnishes make sandwiches more attractive.
14. Name two criteria for holding and storing cold sandwiches.

16

Chapter Sixteen Salads

COMPETENCY TO DEVELOP

- Prepare salads and salad dressings.

OBJECTIVES TO ACHIEVE

- Identify types of salads.
- Describe menu uses of salads.
- Describe the basic parts of a salad.
- Name the basic types of salad dressings.
- Describe the steps in preparing salad dressings.
- Identify various salad ingredients.
- Describe the steps in preparing and storing salad ingredients.
- Describe procedures for preparing tossed, molded, and arranged salads.
- Describe procedures for serving and garnishing salads.
- Summarize procedures for holding and storing salads and salad dressings.

Salads add variety, crispness, color, and refreshing flavors to meals. Salads may be simple or elaborate. They usually contain combinations of vegetables, fruits, or both. A heartier salad may include protein foods, such as beans, peas, cheese, fish, meat, poultry, or eggs. Some salads are made with a gelatin base.

Types of Salads

The three basic types of salads are combination, arranged, and molded. Each may be made with a variety of ingredients.

COMBINATION SALADS

Combination salads are made of pieces of food mixed together. Combination salads include green salads, vegetable salads, fruit salads, and cooked salads.

Green Salads

Tossed green salads are made of one or more types of salad greens. The greens for tossed salads are broken into small pieces. If a knife is used to cut the greens its blade must be able to hold a very fine edge. Generally, the salad knife has a narrow, pointed blade between 6 and 8 inches long. For best results, use a knife with a blade made out of one of the three following steels: (1) carbon steel–traditional favorite–holds an extremely sharp edge, (2) stainless steel–doesn't rust or corrode, but is harder to sharpen than carbon steel, (3) high-carbon stainless steel–is a new alloy that combines carbon and stainless steel, yielding a blade that will hold a fine edge, and doesn't rust, corrode, or discolor, but this knife is expensive. The greens should be dry, not wet. The salad may be flavored with herbs. The salad bowl may be rubbed with garlic for flavor. Dressings, salt, pepper and other seasonings should be added just before serving or by the customer. Chopped egg, bacon bits, sliced salami or Parmesan cheese may be used as garnishes. Tossed salads may be plated in the kitchen, or served from a large bowl of salad, or be served at the table. Tossed salads are often featured on salad bars and tray lines.

Vegetable Salads

Vegetable salads are welcome changes from traditional tossed salads. Beets, celery, asparagus tips, beans, cauliflower, tomatoes, peas, and carrots are all popular ingredients for vegetable salads. The vegetables can be fresh, cooked, canned, or marinated, but should never be mushy. They may be served alone, arranged on a bed of lettuce, or tossed with salad greens. Appropriate garnishes for vegetables include hard-cooked eggs, chives, radishes, green or red peppers, olives, and parsley.

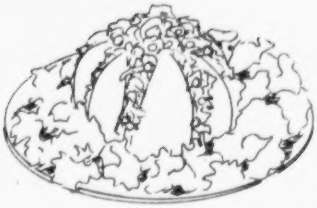
Fruit Salads

Peaches, apples, oranges, bananas, pineapple, melon, or grapefruit may be used in combination salads. Fruit-based combination salads include chicken Waldorf salad and a variety of fruit salads. Mayonnaise, French, or a sweet dressing may be used. Fruit salad may surround cottage cheese, be served on a bed of lettuce, or served in a small glass dish or bowl. Sometimes fruit salad is served in a scooped-out half of pineapple, grapefruit, or melon. Chopped nuts, cherries, or sprigs of parsley or mint make attractive garnishes for fruit salads.

Cooked Salads

Cooked salads are made from cooked foods. Many combinations of ingredients are possible in cooked salads. They may be made of vegetables, seafoods, or meats. Some are a mixture of several ingredients. Cooked salads include potato salad, macaroni salad, tuna fish salad, and egg salad. The protein and starch foods used in cooked salads may be boiled, steamed, baked, or roasted. Vegetables are usually cooked whole, then cooled, cut, and blended with the dressing. Cooked salads may have a mayonnaise or other dressing. Some cooked salads are served hot; others are served cold.

ARRANGED SALADS



Sometimes salad ingredients are decoratively arranged on the salad plate. Ingredients for arranged salads include eggs, meats, cheeses, fruits, and vegetables. The ingredients should be artistically arranged, but should not appear stiff or contrived. Arranged salads include peach halves studded with cloves, a scoop of cottage cheese in a pineapple ring, or a fan of grapefruit and avocado slices. Garnishes such as cherries or mandarin oranges may be part of the design.

MOLDED SALADS

Molded salads made with a gelatin base are popular. Either plain or flavored gelatin may be used. Fruit or vegetable juices, such as lime juice and tomato juice, may be used as the liquid which flavors gelatin. Tomato aspic is an example of a gelatin salad with a vegetable juice base.

A variety of foods may be combined with the gelatin. Pieces of fruits, vegetables, or meat can be mixed into the gelatin as it begins to thicken. For example, grated carrots may be added to lemon flavored gelatin. Leftover foods can be used in gelatin salads.

Gelatin salads can be prepared ahead of time. They can be molded in many sizes and shapes, such as a ring, star, fish, or pineapple. Layers can be made up of different colors. Whipped cream or mayonnaise can be combined with the gelatin. Molds can be decorated before filling so that when they are unmolded they have an attractive design.

Menu Uses of Salads

In food service, salads are usually classified according to their menu use. Salads may be served as appetizers, entrees, accompaniments, or desserts.

An ***appetizer salad*** is served at the beginning of a meal. Appetizer salads are small, colorful, tasteful, light salads which whet the appetite for the rest of the meal. Appetizer salads are often served with a highly seasoned dressing. The ingredients may be marinated. To ***marinate***

(MAR uh NAT) means to soak food in a marinade for several hours. A ***marinade*** (MAR hu NAD) is a mixture of liquids and seasonings. Marinating allows the food to absorb the flavor of the marinade.

Entree salads are hearty salads served as the main course of the meal. They are especially popular at lunch. Entree salads often include meat, poultry, fish, cheese, or eggs as ingredients. Hearty salads can also be made with kidney beans, potatoes, rice, or macaroni. These salads may be featured on the menu with soup, sandwiches, bread, or rolls.

Accompaniment, or side dish, ***salads*** are served with the main course of the meal. They are usually larger than an appetizer salad, but not as large or hearty as an entree salad. Accompaniment salads may be lighter if served with a heavy entree and heavier if served with a light entree. If served before the main course, they may act as both appetizer and accompaniment. Accompaniment salads should be light and refreshing. They are usually made with fruits and vegetables and may be only greens. Accompaniment salads do not usually include meat, poultry, or fish, but they may include small amounts of cheese or eggs.

Dessert salads are colorful and attractive endings for meals. They are sweet and light. The main ingredient is usually fruit and nuts are often included. Dressings are usually sweet. Dessert salads, especially those made with gelatin, are likely to be topped with whipped cream or whipped cream topping.

The chart below lists examples of each type of salad:

TYPE SALAD	EXAMPLES
Appetizer	Fruit salad Marinated shrimp on lettuce Melon and avocado slices on watercress Mushrooms, green pepper, and cauliflower Orange and grapefruit sections on spinach leaf
Entree	Chef's salad Fruit plate with yogurt or cottage cheese Tuna or chicken salad Tomato stuffed with egg salad Spinach salad with chopped egg and bacon
Accompaniment	Mixed vegetable, or garden salad Mixed fruit on lettuce Cole slaw Pineapple-carrot salad Fruit in gelatin Three-bean salad
Dessert	Frozen fruit salad Molded fruit salad Mixed fruit salad Melon wedges

Salad bars are popular in many types of food service establishments. Salad bars attractively present a variety of salad ingredients and salads along with a choice of dressings and toppings. Customers may choose the ingredients or salads they want and add the dressing and toppings of their choice. Food service operators find salad bars profitable because they save the labor cost of making individual salads in the kitchen.

Salad bars vary from simple to elaborate. Simple ones may offer only salad greens, a few chopped vegetables, canned vegetables, and two or three dressings. A more elaborate salad bar may include thinly sliced meat, fish, poultry, eggs, a variety of cheeses, and a selection of prepared salads. The ingredients and salads presented on the salad bar should appear fresh and appealing. Vegetables should be crisp, never dry or wilted.

Salads and salad ingredients may be placed in pans or bowls in a salad bar. Containers should be neither too large nor too small. It should be easy to remove the food without knocking any out or having to chase it around the container. Appropriate utensils should be provided—slotted spoons for draining juice from foods, solid spoons for foods without juice, tongs for items which may be picked up one at a time. A sneeze guard should protect the items on the salad bar.

Parts of a Salad

Salads have three basic parts. These parts are the base, the body, and the dressing.

BASE

The ***base*** or underliner refers to the foundation of the salad. It is usually a leafy green vegetable, like lettuce. Many different greens may be used for the base of a salad. Lettuce is the most popular base, but endive, escarole, and spinach are also used. Other items such as cottage cheese may also be used as the salad base. The base of the salad keeps the plate from looking bare and adds contrast in color and texture.

BODY

The main part of the salad is called the ***body***. The name of the salad often describes the body of the salad. For example, mixed vegetable, fruit, tuna or chicken salad are named for the primary ingredient of the salad's body. The salad body may be made of protein foods, such as meat, fish, poultry, cheese, or eggs, or it may be composed of vegetables or fruits. A combination of ingredients is often used.

DRESSING

The third part of the salad is the ***dressing***. The dressing adds flavor and tartness to the salad. There are three basic types of salad dressing–French, mayonnaise, and cooked dressings.

French dressings have an oil base. They may be thin or thick depending on whether or not a binder is used. Vinegar and oil type French dressings are thin dressings. They form only temporary emulsions. An ***emulsion*** (i MUL shun) is a suspension of droplets of oil in a liquid. An Italian type dressing is an example of a ***temporary emulsion***. On standing, the oil separates from the liquid. When a ***binder*** or emulsifying agent is added, the oil is held permanently in suspension, and the dressing remains thick and creamy. Egg yolks and gelatin are used as binders to create creamy dressings which are ***permanent emulsions***. French dressings are used on greens, vegetables, and fruits.

Mayonnaise is a thick, smooth dressing made with a permanent emulsion of eggs, oil, vinegar, and seasonings. It must be spooned rather than poured. It is used with meat, fish, poultry, cooked vegetables, and some fruit salads. It may be mixed with chopped onion, eggs, cheese, and chopped pickle.

Cooked dressings are thick and tart. They are thickened with egg, cornstarch, or flour instead of an oil emulsion. Cooked dressings are used in potato salads, coleslaw, and many meat, poultry, and fish salads.

Preparing and Storing Salad Ingredients

Almost any raw, cooked, or canned vegetable or fruit can be used to make a salad. Cooked or canned meat, poultry, or fish can be added for variety. Small amounts of leftover food can also be used in salads.

GREENS

Greens may be used in the body of the salad as well as in the base. They may be used alone or combined with other ingredients. The most commonly used salad green is iceberg lettuce. Other frequently used lettuces include butterhead, bibb, romaine, curly endive, and escarole. Other leafy vegetables used in salads are turnip and mustard greens, spinach, regular or red cabbage, and Chinese cabbage.

Wash, drain, and crisp salad greens before using them. Wash salad greens carefully and thoroughly in cold running water to remove dirt and insects. Remove the tough stems, older ribbed outer leaves, and any bruised or wilted leaves. Always handle greens gently to prevent bruising. To clean the lettuce, remove the core by hitting the core end sharply on the counter, then twisting the core to remove it. Run water into the area where the core was removed and separate the lettuce leaves. Turn the core end down and drain. Drain greens in a colander or on paper towels. To crisp salad greens, store tightly covered in the refrigerator, or cover with a towel and ice. Do not pack the greens so tightly that they become bruised.

Greens are expensive. Plan ahead to ensure the best use. Use outer leaves for cups. Save the inner leaves for tossed salads.

All salad greens are fragile and must be handled with care. They bruise and discolor easily. Hand tearing or using stainless steel cutlery prevents discoloration. Commercial products are also available to prevent discoloration. Refrigerate greens to prevent wilting.

VEGETABLES

Many types of vegetables are used in salads. Either fresh, frozen, cooked, canned, or dehydrated vegetables may be used. Because appearance is so important in salads, only the highest quality vegetables should be used. They should be firm, colorful, free from obvious blemishes, and show no signs of rot or decay. Wilted vegetables are unsuitable for use in salads.

When preparing vegetables, be careful to preserve taste and texture. Remove the inedible parts of vegetables. Be sure they are free from defects.

To prepare vegetables such as carrots and celery, wash them thoroughly using a brush if needed, pare them if necessary, and cut them to desired shapes. Raw vegetables may be sliced, diced, chopped, shredded, or grated. Use a sharp, stainless steel knife to cut vegetables to avoid bruising them during preparation. To remove the skins of tomatoes, dip them in boiling water until the skin is loosened, and then dip the tomatoes in cold water.

To prepare cooked vegetables for salad use, cook the vegetables until just done. Over-cooking causes loss of nutrients, color, and desired texture. Drain cooked or canned vegetables well before using.

To prepare dehydrated or dried vegetables for salad use, prepare or ***reconstitute*** according to manufacturer's directions. Sweet and white potatoes, peas, beans, carrots, and onions are some of the dehydrated vegetables which may be used in salads.

Store vegetables in the refrigerator if they are not needed immediately. For best results, place them in a container and cover them with a clean, damp cloth or plastic wrap before refrigerating. If vegetables are not as crisp as desired, enclose them in a plastic bag with a small amount of ice and refrigerate for a few minutes.

FRUITS

Salads may include raw, cooked, canned, or dried fruits as ingredients. Frozen fruits are seldom used in salads because they become mushy when defrosted. Pre-prepared citrus slices are used in many institutions and restaurants to save preparation time. Only high quality fruits should be used in making salads. Fruits should be firm, juicy, flavorful, and free from blemishes.

Fruits should be washed thoroughly before using. Decayed fruits should be discarded. Berries should be washed carefully to remove soil, then drained. To prevent loss of water soluble vitamins and minerals, do not soak fruits in water.

Some fruits, such as bananas, apples, peaches, pears, and avocados, turn dark when peeled and cut surfaces are exposed to air. Dip these fruits in an ascorbic acid solution to prevent darkening. Use lemon juice, fruit juice, vinegar and water, citric acid and water, or a commercial product. Remove inedible seeds, skins, and stems from all salad fruits.

Drain and chill canned fruits before using in salads. Save the juices for use in gelatin salads or fruit punches. Soak dried fruits to ***rehydrate*** or restore the moisture removed by drying.

After preparation, store fruits in the refrigerator in tightly covered containers.

PROTEIN FOODS

Protein foods such as meat, poultry, fish, cheese, and eggs are used in main course salads. Sometimes leftover protein foods are used in making salads.

Meat, Poultry, and Fish

The meat, poultry, or fish used in salads may be freshly cooked, canned, or freeze-dried. ***Freeze-dried*** products are first frozen, and then the water is evaporated. Freeze-dried products require no refrigeration and take little storage space. Meat, poultry, and fish often are marinated in vinegar and oil with spices and herbs.

Meat, poultry, and fish may be diced, sliced, or cut in strips. Pieces should be bite-sized and easily recognizable. Sanitize the cutting or chopping board before use to prevent contamination of these protein foods. Protein foods mixed with mayonnaise should be handled carefully to prevent bacterial contamination.

Eggs

Only top-quality eggs are suitable for use in salads. Choose large eggs for slicing or stuffing. For chopping, smaller ones may be used. Keep eggs under refrigeration before and after cooking.

To prepare hard-cooked eggs, first bring eggs to room temperature. The eggs are less likely to crack when placed in boiling water if they are room temperature. Lower the eggs in a wire basket slowly into boiling water. Reduce the heat to below boiling and cook 12 minutes or until eggs are just hard. Cool immediately under cold running water. Overcooking and failure to cool immediately causes the white to toughen and the yolk to have a greenish ring around it.

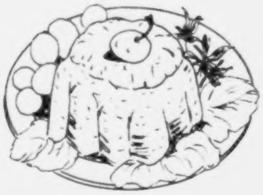
Shell eggs immediately after cooking. Crack the larger end first and peel under cold running water. If the shell sticks, use a teaspoon to remove the egg from the shell.

Cheese

Popular cheeses for use in salads include cottage, blue, Roquefort, and Parmesan. Cottage cheese is an unripened cheese which combines well with vegetables or fruit. Blue, Roquefort, and Parmesan are some of the ripened cheeses popular in salads. Ripened cheeses have a sharp, distinctive flavor that adds to the taste of a salad. They may be grated and crumbled on the salad as a topping, or blended into the dressing. Cubes or strips of cheese may be mixed with other ingredients in the body of the salad.

Most cheeses require refrigeration. Cottage cheese is especially perishable. Most ripened cheeses will keep for months if refrigerated in air-tight containers. Parmesan, a hard dry cheese, may be kept in dry storage.

GELATIN



Molded salads are made with a gelatin base. The gelatin may be either plain or flavored. Gelatin may be purchased either in granular form or in sheets. When dissolved in water, it makes the liquid ***congeal*** (kuhn JEL) or thicken and become solid when cold. Gelatin may be used alone or with fruits, vegetables, or meats.

Gelatin can be molded into many shapes. Molded, ready-to-eat gelatin salads can be purchased commercially to save preparation time.

To prepare gelatin, use a small amount of hot liquid to dissolve the gelatin. The hot liquid must be at least 95° Fahrenheit, but boiling water is best. Unflavored gelatin must be soaked for five minutes in a small amount of cold water before being dissolved in hot water. Fruit flavored gelatin does not require soaking. After the gelatin is completely dissolved, add cold liquid to help the mixture to gel more quickly.

To speed the setting process, add part of the hot water to dissolve the gelatin, and stir with a wire whip to ensure that the gelatin dissolves thoroughly. Instead of the remaining hot water, use ice water. Add crushed ice instead of cold water or liquid. Remove any large pieces of ice that do not melt. Stir until all the ice is dissolved. Mold in a flat pan and refrigerate. The salad will congeal almost instantly.

Wait until the gelatin begins to set before adding solid foods such as shredded carrots, cabbage, or fruits. This will prevent the solid foods from sinking to the bottom or rising to the top. When solid foods are added or the gelatin is molded in a large pan, adding additional plain gelatin helps the gelatin hold up and prevents ***weeping***, (seeping of liquid from the gelatin as it stands). For a firm gel use 1 1/2 lb. of flavored gelatin and 2 1/2 oz. of plain gelatin per gallon of water.

Gelatin must be kept refrigerated until nearly serving time. Unmold the salad just before serving. To unmold, fill a sink or pan with hot water. The container must be large enough to hold the mold. Place the serving plate nearby. Dip the bottom of the mold into the hot water for about thirty seconds. Shake the mold to see if the gelatin moves. When the gelatin has loosened, remove the mold from the water. Dry the outside of the mold. Place the serving plate on top of the mold. Turn the mold and plate over quickly. Tap the mold slightly on the top and remove. The gelatin should come out of the mold easily. Place the salad in the refrigerator until served.

Gelatin salads are often molded in a large, flat pan. The gelatin is then cut into servings. Cut the gelatin lengthwise and crosswise to form the number of servings designated. Use a spatula which has been dipped in hot water to remove the gelatin from the pan.

OIL AND VINEGAR

Oil and vinegar are important ingredients in most salad dressings. Oil improves the appearance of the salad by adding gloss. It also makes the salad more palatable by making it slightly slippery. Salad oil should be light, fresh-tasting, and high quality. When oil deteriorates because of warmth, light, or age, it acquires an off or rancid taste. For salads, vegetable oils from corn, cottonseeds, and peanuts are preferred. They have a sweet, bland taste and do not spoil easily. Olive oil, an oil with a distinctive taste, may also be used, but it is expensive and becomes easily rancid.

Vinegar adds tartness or acidity to a salad. Popular vinegars for salads include cider vinegar, wine vinegar, and white vinegar. Vinegar may be seasoned with herbs such as tarragon. Lemon juice is sometimes substituted for vinegar or used with vinegar in making salad dressings.

FLAVORINGS

Additional flavor is added to salads by flavor ***enhancers***. The best known flavor enhancer is salt. Monosodium glutamate is a flavor enhancer which brings out the flavor in other foods, though it has no flavor of its own.

Onion and garlic are other popular flavor enhancers. Green, Bermuda, and Spanish onions are used most often in salads. They may be sliced, diced, or chopped. Garlic is peeled and chopped. Because it has a strong flavor, the salad bowl may be just rubbed with garlic. Sometimes, garlic is browned in a small amount of salad oil, then added to the salad.

Herbs and spices also add flavor to salads. Popular salad herbs include parsley, horseradish, mustard, and mint. Pepper and paprika are examples of spices used in salads. Mixtures of herbs and spices made specifically for use in salads are available. Herbs and spices should be used sparingly in salads. Their flavor should enhance, not dominate, the taste of the salad.

Convenience Salads

Production time and cost can be saved in food service by using convenience ingredients or convenience salads. Many convenience ingredients are available. Washed salad greens and shredded cabbage may be purchased. Already prepared fruits are also available. Canned, frozen, dehydrated, and freeze-dried items can save time and energy. Ready-to-use salad dressings and packaged salad dressing mixes are other time savers.

Convenience salads are available in several forms. Prepared salads, such as gelatin, coleslaw, macaroni, potato, or fish, may be purchased. Placed on a base of greens, these salads are ready to serve. The newest convenience salads are freeze-dried salad mixes. The mixes require only the addition of water. Even the dressing is included. Freeze-dried salad mixes include egg, ham, shrimp, and tuna. These mixes do not require refrigeration until after the water is added.

Salad Production

Organization is the key to salad production. Many salad ingredients can be prepared in advance and stored in the refrigerator. Molded salads should be prepared twenty-four hours ahead. Early preparation allows plenty of time for the gelatin to set. Greens should be washed and prepared for serving several hours before the mealtime. Other vegetables and fruits should also be prepared in advance. All garnishes should be prepared in advance.

In preparing the salad, work quickly so the unrefrigerated ingredients do not wilt. To prevent bruising, do not over-mix the ingredients. For sanitation and to preserve crispness, keep salad ingredients cold. To prevent loss of crispness, add the dressing as close to serving time as possible. Arrange the ingredients simply, but artistically. Garnish the salad attractively. Serve cold salads well-chilled.

The organization of the salad station will depend on the number of salads to be prepared and the number of different salads on the menu. One section of the salad station may be used for preparation of individual salads and appetizers and another for dishing salads from a bowl or pan. More room and more workers are needed to prepare a large quantity of salads.

To assemble salads, follow the guidelines below:

- Get out all the tools and equipment needed.
- Assemble all salad ingredients.

- Set up a production line for the appropriate number of salads and workers.
- Assemble the salads as instructed, using the correct portions.
- Refrigerate the salads as instructed, using the serving time.

When several workers work together to form a production line, each one is responsible for a particular operation. For example, the first worker might pick up the plate and add the salad base. The second worker might place the body of the salad on the base. The third worker might add the dressing and garnishes and place the completed salad on a salad cart. The cart should be refrigerated when full.

When one worker assembles the salads, the ingredients and tools are usually placed to the worker's left. The salad plates are arranged individually on the counter. The worker uses both hands to pick up the salad base and place it on the plates. Next, the body of each salad is placed on its base. Then the dressing, if any, is added. The salads are garnished. Finally, the salads are placed on a cart and refrigerated. Two workers can work from the same supply dishes by working on opposite sides of the table.

Serving and Garnishing Salads

Salads may be served in the kitchen or from a salad cart or salad bar. For cold salads, both ingredients and serving plates should be chilled. Hot salads should be served hot.

GARNISHES

Salads should be simply garnished. The garnish should be edible. It should complement both the flavor and color of the salad. Many of the ingredients used in preparing salads are suitable garnishes. Vegetables in interesting shapes such as wedges, rings, curls, and strips are used as salad garnishes. Whole or halved fruits and berries are also appropriate garnishes for salads.

TOPPINGS

A variety of foods can be used as toppings for salads. ***Toppings*** add flavor and make a salad crunchy. Popular toppings include freshly ground black pepper, crisp bacon and ham bits, sunflower seeds, grated cheese, hard cooked eggs, and croutons. ***Croutons*** (CROO TAHNS) are small, toasted cubes of bread which may be seasoned for added flavor. Products which imitate the flavor of bacon and ham bits may be used instead of the real thing. Whipped cream may be used as a topping for a fruit or flavored gelatin salad.

Holding and Storing Salads

Salad greens are very perishable. After washing, they should be well-drained to avoid spoilage by excess water. Store washed greens in a covered container or moisture-proof wrap in the refrigerator. Handle salad greens and other vegetables gently to avoid bruising.

Store salad dressings in tightly covered containers in the refrigerator. Do not freeze them. Very cold temperatures may cause mayonnaise to separate and French dressing to become cloudy.

Salads prepared in advance should be stored in tightly covered containers in the refrigerator. This will prevent drying or odor absorption. Leftover salads which include protein foods should be discarded. These foods should be kept out of the temperature danger zone (40-140°F) as much as possible. Protein foods and foods containing mayonnaise are especially likely to become contaminated with bacteria. For this reason, they are frequent sources of food borne illnesses.

Points To Remember

- Salads add variety, crispness, color, and refreshing flavor to meals. They may be served as appetizers, entrees, accompaniments, or desserts. Salad bars are also popular.
- The three basic types of salads are combination, arranged, and molded. Each can be made with a variety of ingredients.
- Combination salads are made of pieces of food mixed together. Combination salads include green salads, vegetable salads, fruit salads, and cooked salads.
- Sometimes salad ingredients are decoratively arranged on the salad plates. Ingredients may include eggs, meat, cheese, fruits, and vegetables.
- Molded salads are made with either plain or flavored gelatin. A variety of foods may be combined with the gelatin.
- An appetizer salad is served at the beginning of a meal to whet the customer's appetite for the rest of the meal.
- Entree salads are served as the main course of the meal and often include protein foods.
- Accompaniment, or side dish, salads are served with the main course of the meal and should be light and refreshing.
- Dessert salads are sweet and light, and are a colorful ending for meals.
- Salad bars have become popular and attractively present a variety of salad ingredients and salads along with a choice of dressings and toppings.

- The three basic parts of a salad are the base, the body, and the dressing.

- The base refers to the foundation of the salad and is usually a leafy green vegetable. The name of the salad often describes the body and is the main part of the salad. The dressing adds flavor and tartness to the salad.

- The three basic types of salad dressings are French, mayonnaise, and cooked.

- Salad ingredients could include almost any raw, cooked, or canned vegetable or fruit. Protein foods can be added for variety.

- Greens are expensive and should be handled carefully to prevent bruising. Before using, they should be washed and drained and need to be refrigerated to prevent wilting.

- Fresh, frozen, cooked, canned, or dehydrated vegetables may be used in salads. When preparing vegetables, care should be taken to preserve taste and texture. Inedible and defective parts should be removed.

- Raw, cooked, canned, or dried fruits may be included in salads. Use only high quality fruits and wash thoroughly before using. After preparation, store fruits in the refrigerator in tightly covered containers.

- Protein foods such as meats, poultry, fish, cheese, and eggs are used in main course salads. The meat, poultry, or fish may be freshly cooked, canned or freeze-dried. Popular cheeses used in salads include cottage, blue, Roquefort, and Parmesan.

- Plain or flavored gelatin may be used to make molded salads. Gelatin may be used alone or with fruits, vegetables, or meats.

- Oil and vinegar improve the appearance of the salad by adding gloss and tartness or acidity to a salad.

- Flavor enhancers add additional flavor to salads. Popular flavor enhancers include salt, monosodium glutamate, onions, garlic, herbs, and spices.

- Convenience salads and ingredients are available that save production time and cost.

- The key to salad production is organization. Ingredients should be kept at the proper temperature and handled carefully to prevent loss of crispness and prevent bruising.

- The organization of the salad station depends on the number of salads to be prepared. More room and more workers are needed to prepare a large quantity of salads.

- Garnishes for salads should be simple and edible and should complement both the flavor and color of the salad.
- Toppings for salads add flavor and crunchiness. Popular toppings include freshly ground black pepper, crisp bacon and ham bits, sunflower seeds, grated cheese, hard cooked eggs, and croutons.
- Salad greens are very perishable. They should be well-drained after washing and stored in tightly covered containers in the refrigerator to prevent drying or odor absorption.

Words To Know

accompaniment salads
appetizer salad
base
binder
body
congeal
cooked dressings
croutons
dessert salads
dressing
enhancers
freeze-dried
French dressing
marinade
marinate
mayonnaise
permanent emulsions
reconstitute
rehydrate
salad bars
temporary emulsion
toppings
weeping

Questions For Review

1. Name the three basic types of salad and an example of each.
2. Describe the salads listed below and give an example of each.
   a. appetizer salad
   b. entree salad
   c. accompaniment salad
   d. dessert salad
3. Give two reasons why salad bars have become so popular.
4. Name and describe the three basic parts of a salad and give examples of each part.
5. For the salad ingredients listed below, describe the appearance; explain the use, care, and storage; and give examples of each.
   a. greens
   b. vegetables
   c. fruits
   d. protein foods
   e. gelatin
6. Explain the purpose of oil and vinegar in salad dressings.
7. Name three popular flavor enhancers.
8. List two examples of convenience salads.

9. Describe ways to prevent bruising of salad ingredients and to preserve crispness.

10. List steps to follow when more than one worker assembles the salad.

11. List two examples of types of salad garnishes and toppings.

12. Explain the proper procedure for holding and storing salad greens, salad dressings, and prepared salads.

17

Chapter Seventeen
Appetizers

COMPETENCY TO DEVELOP

- Prepare appetizers and garnishes.

OBJECTIVES TO ACHIEVE

- Name the basic types of appetizers.
- Describe procedures for preparing appetizers.
- Describe procedures for serving appetizers.
- Describe procedures for holding and storing appetizers.

An ***appetizer*** is a small amount of food used to stimulate the appetite. Appetizers should be light and tasty. They should be colorful and attractive, fresh and tempting, and served before the main course of a meal.

A limitless variety of appetizers are possible. Creativity and imagination are essential in their preparation. Most appetizers can be classified into one of seven groups:

- Hors d'oeuvres
- Canapes
- Spreads and dips
- Cocktails
- Relishes
- Salads
- Soups

Hors d'oeuvres

Hors d'oeuvres (or DURVS) are small, tasty bits of food served before a meal. They may be cold or hot. They may be finger foods or foods eaten with a small pick or fork. They may require a little or a lot of preparation. Hors d'oeuvres may be arranged on individual plates and served as the first course, or a variety of hors d'oeuvres may be arranged on a tray and passed to guests. Items that make up an hors d' oeuvre should vary in color, texture, form, and flavor.

Cold hors d'oeuvres may be purchased ready to serve, or they may require preparation. Cheese, fish, and meat are examples of foods which may be purchased ready to serve. Other cold hors d'oeuvres require preparation. They may be made from hard cooked eggs, raw or cooked vegetables, fruit, fish, meat, or cheese. Cold hors d'oeuvres are usually prepared in the pantry or cold food preparation area. Hot hors d'oeuvres are usually prepared at other stations. The chart below shows examples of popular hors d'oeuvres.

Type	**Examples**
Cold hors d'oeuvres	
Meat	Thinly sliced smoked sausages, salami, ham, rare roast beef, cocktail wieners, or other meat
	Ham and cream cheese rolls
	Salami and cheese rolls
Fish	Smoked salmon, smoked oysters or clams, shrimp, pickled herring, or fish roe
	Shrimp and pineapple cube on a pick
	Skewered anchovies, pearl onions, sliced cucumbers, cherry tomatoes, or stuffed olives
	Herring marinated in sour cream
Cheese	Cubed cheese on toothpicks
	Soft cheese with crackers
	Cheese balls
Eggs	Deviled or stuffed eggs
Vegetables	Carrots, green pepper, zucchini, cucumber, turnips, or celery cut into sticks, circles, or slices
	Radish roses or fans
	Carrot curls
	Cauliflower buds
	Whole cherry tomatoes
	Celery stuffed with cheese
	Quartered cherry tomatoes filled with a mixture of cream cheese and blue cheese
	Cucumber stuffed with ham or shrimp mixture
	Artichoke hearts marinated in Italian dressing
Fruit	Sliced apples or pears
	Melon balls or cubes

	Dried apricots, prunes, or dates stuffed with cream cheese and garnished with nuts Fresh strawberries and powdered sugar
Hot hors d'oeuvres	Miniature pizzas Oysters broiled in bacon wrap Minature meatballs in highly seasoned tomato sauce Small pastries filled with chicken or shrimp mixture Small wedges of ***quiche*** (KEESH) Tiny hot croquettes Fried clams, shrimp, or mock chicken legs Broiled cocktail wieners

Canapes

Canapes (KAN uh PAY) are small, open-faced sandwiches. They are usually served as appetizers before the main course of a meal. They may also be served at a tea, reception, or party. Canapes may be either hot or cold. Canapes usually have three parts–the base, the spread, and the garnish. Sometimes the canape is covered with a glaze called an ***aspic*** (AS pik).

BASE

The base of a canape may be small pieces of bread, toast, crackers, wafers, chips, or pastries cut into various shapes. When bread is used, long, square loaves are preferred. The bread is thinly sliced and the crusts are trimmed. White bread is usually used, but whole wheat bread, rye, or oatmeal may also be used. Fruit, nut, or other quick breads may also be used. The bread is usually toasted on one side. Day-old bread is best for spreading. Crackers, pastry, and wafers are less satisfactory than bread. They quickly lose their crispness.

SPREAD

The spread for canapes is usually based on butter or margarine. The butter may be mixed with mayonnaise, cheese, mustard, fish, or vegetables. The spread should be soft enough to cover the bread easily. The flavor should complement the rest of the canape. Herbs may be blended with the butter to add flavor.

The spread has several purposes. It adds flavor to the canape. It helps keep the base from becoming soggy. It helps keep the bread from drying out. And, it helps hold the garnish in place.

Apply the spread lengthwise on the untoasted side of the bread. Cover the slice evenly to the edges. Refrigerate until the spread has hardened, then cut into any desired shape. Possible shapes are illustrated in Chapter 15, Sandwiches.

GARNISH

An edible garnish is often added to the top of the canape to make it more attractive. The garnish should add color, shape, and flavor. The garnish should complement the flavor of the spread. Anchovies, bits of fish, or curls of meat may be used. Herbs such as parsley or mint and spices such as paprika may be used to garnish canapes. Vegetables such as carrot curls, radish slices, or green pepper strips are also good choices.

ASPIC

After the canape is prepared, it may be covered with an aspic. Aspic is a jelly flavored with boullion or tomato. It is spread thinly over the canape. The aspic helps hold the garnish in place. It also helps keep the canape from drying out. When chilled, it forms a thin, glossy glaze.

INGREDIENTS

Various kinds of canapes are possible. Eggs, cheese, fish, meat, and poultry are often the primary ingredients. These ingredients may be used as part of the spread or as the garnish.

CANAPE VARIATIONS

Rolled sandwiches, ribbon sandwiches, and tea sandwiches are variations of canapes. A ***rolled sandwich*** consists of a thin slice of crustless bread spread with filling, then rolled, chilled, and sliced. A ***ribbon sandwich*** is made by alternating crustless slices of whole wheat and white bread spread with filling, then chilling before slicing. ***Tea sandwiches*** are made with sweet breads such as date-nut, banana, or orange-nut spread with softened cream cheese. They may be decorated with a bit of marmalade or preserves. Tea sandwiches may be either closed or open faced.

Spreads and Dips

Spreads are food mixtures similar to sandwich fillings. The spread is served in a dish surrounded by crisp crackers, bread sticks, or tiny biscuit halves. Guests use the spread to make their own canapes. ***Dips*** are soft spreads into which chips, bread sticks, vegetables, and fruit are dipped. Cheese, avocados, clams, anchovies, or shrimp blended with sour cream or softened cream cheese are often the primary ingredients in dips. Chocolate and caramel are usually the primary ingredients in sweet dips.

The foods served with spreads and dips should be chosen with care. The crackers or chips served with spreads and dips should be sturdy enough not to break. Raw vegetables, like cauliflower, celery, mushrooms, carrots, zucchini, broccoli, and cucumber are some of the vegetables served with dips. Fruits such as apples, pears, and bananas should be dipped in an ascorbic acid solution to prevent darkening. Use lemon juice, fruit juice, vinegar and water, citric acid and water, or a commerical product.

Cocktails

Cocktails may be beverages, fruit, or seafood. Cocktails should be colorful, appealing, and cold.

BEVERAGE COCKTAILS

Beverage cocktails may be either alcoholic or non-alcoholic. Alcoholic beverages can only be served by persons who meet strict age requirements. Non-alcoholic beverage cocktails are made of fruit and vegetable juices. The juice should be colorful, tangy, and not too sweet. Orange, pineapple, apricot, papaya, and cranberry are fruit juices frequently used in cocktails. Tomato juice is the most popular vegetable juice used in cocktails. Beverage cocktails are usually served in stemmed glasses. They may be garnished with a sprig of mint, a celery stick, or an olive for added eye-appeal.

FRUIT COCKTAILS

Fruit cocktails are made of fresh or canned fruit. Melon balls, grapefruit sections, orange slices, pineapple tidbits, Bing cherries, sliced bananas, strawberries, pears, and grapes are appealing in fruit cocktails. Fruit cocktails made with pieces of fruit may be served in stemmed glasses.

SEAFOOD COCKTAILS

Seafood cocktails are made of shrimp, crab meat, clams, oysters, or other seafoods. They are usually served with lemon wedges or slices and a spicy tomato sauce. Greens such as lettuce or watercress may be used as a base for the cocktail.

Relishes

Relishes are crisp vegetables, pickles, or olives. Raw vegetable relishes include celery hearts, green onions, radishes, carrots, zucchini, cucumbers, cauliflower, and broccoli. Sweet-sour vegetable relishes include sauerkraut, sweet-sour corn kernels, miniature corn on the cob, pickled beets, and sweet-sour beans. Pickles may be sweet, dill, or sour. They may be whole, sliced, or chunks. Olives may be black or green and may be stuffed with pimento.

Salads

An appetizer salad is small and light. It is crisp and colorful. Its purpose is to stimulate the appetite. It should never be so heavy as to dull the appetite. Tart fruit, salad greens, and seafoods are popular for appetizer salads. Examples of appetizer salads and descriptions of salad preparation techniques are found in Chapter 16, Salads.

Soups

Thin, clear soups are used as appetizers. Their purpose is to stimulate the appetite for the meal that follows. Broth, bouillon, (boo YON) consomme, and jellied soups are popular appetizers. More information on soups and their preparation is in Chapter 18, Soups and Sauces.

Production of Appetizers and Hors d'oeuvres

Most appetizers and hors d' oeuvres are prepared in advance. Some, especially cocktails, may be prepared as they are ordered. When appetizers or hors d' oeuvres are prepared for special occasions, the number prepared is based on the number and types of guests expected, the occasion, the length of serving time, the menu, and the style of service. And, usually, 10 percent more appetizers or hors d' oeuvres than needed are prepared.

For appetizers and hors d' oeuvres which are prepared in advance, assembly line techniques are used in their preparation. For right handed workers, the work flows from left to right. To set up an assembly line for appetizers, follow these guidelines:

- Assemble tools, equipment, and ingredients, arranging them in a logical order.
- Use both hands whenever possible.
- Complete one step in the assembly before beginning another.
- Work at a steady, rhythmic pace.
- Work quickly to keep food out of the temperature danger zone (40° to 140°F).

Two workers can use the same supply dishes by working on opposite sides of the table. More than two workers can form an assembly line by dividing the tasks into logical steps.

Holding and Storing Appetizers and Hors d'oeuvres

Careful attention to sanitation is needed in the preparation, holding, and storing of appetizers. Sanitation is especially important when the foods being prepared contain uncooked food. Sanitation when handling appetizers is also important because the food is cut into small pieces and handled several times. Frequent handwashing and the use of plastic gloves for assembling appetizers helps prevent contamination.

Store appetizers covered in the refrigerator at a temperature of 40°F. or less. Some appetizers can be made in advance and frozen and used as needed. Keeping appetizers out of the danger zone (40° to 140°F) as much as possible prevents the growth of bacteria. Do not let appetizers stand unrefrigerated for more than 4 hours at room temperature. Cover until served.

Points To Remember

- An appetizer is a small amount of light and tasty food served before the meal to stimulate the appetite.
- The seven classifications of appetizers are hors d'oeuvres, canapes, spreads and dips, cocktails, relishes, salads, and soups.
- Hors d'oeuvres are small tasty bits of food. They may be served hot or cold and may be finger foods or eaten with a small pick or fork.
- Cold hors d'oeuvres may be made of meat, fish, cheese, eggs, vegetables, or fruit.
- Canapes are small, open-faced sandwiches and may be either hot or cold. The three basic parts of a canape are the base, the spread, and the garnish.
- A canape is sometimes covered with a glaze called an aspic (a jelly, flavored with boullion or tomato).
- Eggs, cheese, fish, meat, and poultry are the primary ingredients for canapes. Variations of canapes include rolled, ribbon, and tea sandwiches.
- Spreads are similar to sandwich fillings and are used when guests are to make their own canapes. Dips are soft spreads into which chips, bread sticks, vegetables, and fruit are dipped.
- Beverage cocktails may be either alcoholic or non-alcoholic. Fruit cocktails are made of fresh or canned fruit. Seafood cocktails are made of shrimp, crab-meat, clams, oysters, or other seafood. All cocktails should be colorful, appealing, and cold.
- Relishes are crisp vegetables, pickles, or olives.
- An appetizer salad is small and light and is used to stimulate the appetite.
- Broth, boullion, consomme, and jellied soups are often used as appetizers.
- Most appetizers are prepared in advance using assembly line techniques.

- Sanitation is very important in the preparation, holding, and storing of appetizers. Appetizers should be stored covered in the refrigerator at a temperature of 40°F or less.

Words To Know

appetizer
aspic
beverage cocktails
dips
fruit cocktails
hors d'oeuvres
quiche
relishes
ribbon sandwich
rolled sandwich
seafood cocktails
tea sandwiches

Questions For Review

1. Name three types of appetizers.
2. Describe one hors d'oevure from each of the three types from number 1.
3. Give two examples of each of the following types of hors d'oeuvres:
   cold - meat
   cheese
   vegetables
   hot -
4. Describe the three parts of a canape. Give an example of a canape. Identify each part.
5. Describe an aspic.
6. What is the difference between spreads and dips?
7. Give an example of ingredients used in each of the following:
   beverage cocktail (non-alcoholic)
   fruit cocktail
   seafood cocktail
8. Name two examples of relishes.
9. What is the main purpose of appetizers?
10. List the five guidelines to follow in an assembly line for appetizers.
11. What sanitation procedures should be followed in appetizer preparation?
12. How should appetizers be stored?

18

Chapter Eighteen
Soups and Sauces

COMPETENCY TO DEVELOP

- Prepare soups, sauces, and gravies.

OBJECTIVES TO ACHIEVE

- Describe procedures for preparing and using different stocks.
- Identify the types of soups and their characteristics.
- Describe menu uses of soups.
- Describe procedures for preparing soups.
- Describe procedures for garnishing and serving soups.
- Identify basic sauces and their uses.
- Describe procedures for preparing basic sauces.
- Describe procedures for holding and storing soups and sauces.

Many soups and sauces have a common beginning. They are made from stocks, the liquid in which meat, fish, or poultry scraps have been cooked with a variety of vegetables and flavorings. Others have milk or other ingredients as the base. Soups and sauces may be thick or thin. They may be served hot or cold. Convenience forms of many soups and sauces save preparation time in the food service establishment.

Stocks

Stocks are simple, but time-consuming, to prepare. For this reason, convenience stocks are quite popular. To make stock from scratch, bones and scraps of meat are simmered in water for several hours to extract their flavor. Besides the bones and scraps of meat, vegetables, herbs and spices are used to flavor the stock. The broth is strained and cooled, and the fat removed. Because stocks spoil easily, they must be refrigerated quickly and handled with care to prevent contamination. Stock may also be boiled to reduce its volume to 1/2 or 1/4, then frozen for future use.

Additional time may be needed to clarify the stock for use in clear soups. ***Clarifying*** rids the stock of particles that are too fine to be strained out. To clarify stock, a protein food, an acid food, and vegetables are heated in the broth to just below the boiling point. The protein food is usually raw ground beef and egg white. The acid food may be tomato juice, lemon juice, or vinegar. The vegetables are finely chopped or ground. As the boiling point is reached, the mixture coagulates (hardens), forming a solid mass called a ***raft***. The raft separates from the liquid leaving the stock clear.

There are four basic kinds of stocks. Each is named for its color or for the ingredients used in making it. The basic stocks are white, brown, poultry, and fish. ***White stock*** is made from raw bones and scraps of veal or chicken. ***Brown stock*** is made from bones and scraps of beef which have been browned in the oven first. ***Poultry stock*** is made from backs, necks, wing tips, feet, and scraps of meat from poultry. ***Fish stock*** is made from the bones and meat of fish, including fish heads and tails.

Convenience stocks can be bought in powdered, granular, liquid, or pressed-cube form. Both chicken and beef stocks are available in these forms. Hot water is added as directed to ready the convenience stock for use. The resulting stock can be used in soup or sauce recipes.

Soups

Most soups have either a stock base or a milk base. They may be thin or thick. They may be light enough to serve as an appetizer or hearty enough to be a full meal. Some soups are served hot, others cold.

THIN SOUPS

Thin soups may be clear like bouillon and consomme, or unclarified like broth. ***Bouillon*** (boo-YON) is the French word for broth. The different kinds of bouillon include beef, chicken, and lamb. ***Consomme*** (con-so-MAY) is a clear broth made from bouillon. Cooked vegetables, rice, or noodles may be added to a consomme just before serving. Broth is a thin soup which has not been clarified. It usually contains finely diced vegetables, small pieces of meat, and rice, noodles, or macaroni. Thin soups are often served as appetizers.

THICK SOUPS

Thick soups are prepared from a stock or milk base thickened by the addition of starch or starchy foods. Starches used for thickening soups include flour or cornstarch. Starchy foods which will thicken a soup include potatoes, rice, noodles, and barley. Soups may also be thickened with ***roux*** (ROO), a mixture of equal parts of fat and flour. Thickened soups include vegetable soups, creamed soups, and purees.

Vegetable Soups

Vegetable soups are made with diced or cubed vegetables. Also they may contain meat and rice, noodles, or macaroni. Vegetable soups are usually ***hearty***, or filling. The base for a vegetable soup is usually stock. The soup may be thickened with potatoes or with flour. Appropriate garnishes for vegetable soups are chopped parsley, chives, or chervil.

Cream Soups

Cream soups are usually named for their flavoring ingredient. Tomato, asparagus, spinach, celery, chicken, and shrimp are popular flavors of cream soup. Cream soups should be the consistency of thick cream. They should be smooth and velvety–never curdled. Cream soups are made from a milk base which may be combined with chicken or beef stock. They may be thickened by a roux or by flour. Cream soups are often made in a double boiler to prevent scorching. Cream and a garnish may be added just before serving.

Purees

A ***puree*** (pure-AY) is a thick, hearty soup suitable for the main dish of a meal. Puree means mashed. A puree is made from ingredients which are forced through a food mill or china cap. Potatoes, split peas, lentils, beans, and some fresh vegetables such as cauliflower, spinach, and tomatoes are used in puree soups. The food pulp provides both flavor and texture. The base for a puree is usually a meat stock. Chicken stock is used for puree of potato or fresh vegetables. A garnish and the addition of cream is optional.

SPECIALTY SOUPS

Most specialty soups are hearty soups meant to be served as meals. They may be made from a stock, milk, or a combination base. They may or may not be thickened. The thickening, if used, may be a puree or a roux.

There is a great variety of specialty soups. Most have originated in a certain locale. Some specialty soups have been brought to the United States from other countries: French Onion (France), Bouillabaise (boo-ye-BAS) (France), Marmite (mar-MEET) (France), Minestrone (min-e-STRO-ne) (Italy), Olla podrida (O-ya po-DREE-dah) (Spain), Sopa de Abbondigas (SOAP-ah day al-bon-DEE-gahs) (Mexico), Wonton (WAHN-TAHN) (China), Mulligatawney (MUL-eh-guh-TAW-knee) (India). Others have originated in different regions of the United States: New England clam chowder, Philadelphia pepperpot, and Louisiana chicken gumbo.

COLD SOUPS

Some soups are served cold. Cold soups are especially popular in the summer. Popular cold soups include jellied consomme, gazpacho, vichyssoise, borscht, and fruit soup. ***Jellied consomme*** is made by refrigerating consomme until it gels. ***Gazpacho*** (gaz-PACH-o) is a cold soup from Spain. It contains chopped fresh tomatoes and cucumbers. ***Vichyssoise*** (VISH-e-SWAHZ) is a cream soup made from potatoes, onions, leeks, chicken stock, and cream. ***Borscht*** (BORSHT) is a smooth beet soup with sour cream which originated in Russia. ***Fruit soup*** is a cold sweet soup from Norway. It is a mixture of lemons, oranges, and chopped dried fruits cooked in pineapple or apple juice and thickened.

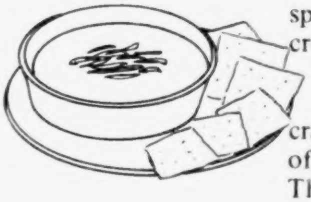
CONVENIENCE SOUPS

Convenience soups are frequently used in food service operations to save time and energy. Convenience soups may be canned or dried. More than 50 varieties of canned soups are available. These are either ready to serve or require only the addition of milk or water. By combining different kinds of canned soups new flavors can be created. Dried soups may contain only the ingredients for the soup stock or they may include dried vegetables and meat. A variety of different soups are available in dried form.

GARNISHING AND SERVING SOUPS

Soups should never be served lukewarm. Hot soups should be served hot in preheated soup dishes. Cold soups should be served cold in prechilled dishes. Cold soups may be served in chilled cups surrounded by cracked ice.

Soups should be garnished attractively. Parsley, paprika, freshly ground pepper, chopped chives, onion rings, bacon bits, hard-cooked egg white or yolk, croutons, or grated cheese make attractive soup garnishes. A lemon, lime, or cucumber slice, chopped chives, or a spoonful of sour cream add appeal to cold soups. A dab of whipped cream is good on fruit soup.



Appropriate accompaniments should be served with soups. Crisp crackers, thin brown toast, bread, pastry, bread sticks, or croutons are often served with soup. Croutons are small toasted cubes of bread. They may be plain or seasoned.

HOLDING AND STORING SOUPS

Soups should be kept above 140°F. or below 40°F. as much as possible. Hot soups should be cooled rapidly before refrigerating. Place the pot of soup in a deep sink surrounded by cold running water. Raise the pot off the bottom of the sink using bricks or heavy pans. Stir the soup with a large paddle to hasten cooling. Refrigerate as soon as the soup reaches approximately room temperature. The soup can be stored refrigerated for several days. Remove from refrigeration only what is needed each day. Store unopened canned and dehydrated soups in a cool, dry place.

Sauces

A ***sauce*** is a richly flavored stock or liquid used to complement another food. It may be thickened or unthickened. It may be used to add moisture, color, or texture to another food. It may become a part of a dish or be served as an accompaniment. It should complement, not disguise, the natural flavor of the food.

Most sauces are prepared from a few basic sauces. These basic sauces are called ***foundation sauces***, or ***mother sauces***. The basic sauces are brown sauce, tomato sauce, white sauce, cream sauce, egg sauce, and butter sauce. Other sauces include cold sauces and sweet sauces.

BROWN SAUCE

Brown sauce is made from a well-browned roux and brown stock from beef. Tomato paste and wine are often added. Variations of brown sauce include jelly sauce, mushroom sauce, picante (pe-CHAN-tee) sauce, and savory mustard sauce. Brown sauce and its variations are usually served with meats.

TOMATO SAUCE

Tomato sauce has tomato juice, tomato puree or paste, or fresh tomatoes as its base. It can be made with wine or water, or with beef, fish, or chicken stock. Spices, garlic, sugar, onions, bacon, or ham can be added. The type of tomato sauce preferred in the United States is ***marinara*** (mar-uh-NAR-uh) ***sauce***. It originated in Italy. The meat sauce served with pasta is a variation of tomato sauce. Spanish sauce, Creole sauce, and cacciatore sauce are other variations of tomato sauce.

WHITE SAUCE

White sauce is made with white stock from veal, chicken, or fish thickened with roux. White sauce is also called ***veloute*** (veh-LOU-tay), which is the French word for velvety. By adding heavy cream and egg yolks several secondary sauces can be made. The mixture of cream and egg yolks is called a ***liaison*** (LEE-uh-zahn). It is added just before the sauce is served. With the addition of liaison, veloute of veal becomes sauce allemande. Veloute of chicken becomes sauce supreme. Veloute of fish becomes sauce vin blanc (white wine sauce). Additional sauces can be made from each secondary sauce. White sauce may be served on beef, pork, veal, lamb, eggs, fish, poultry, or vegetables.

CREAM SAUCE

Cream sauce is made from milk thickened with roux. Another term for cream sauce is bechamel (BAY-sha-MEL). Cream sauce's consistency may be thin, to medium, to thick. The use of the sauce determines its thickness. Variations of cream sauce include Mornay, a la King, Creme, and Newberg. Cream sauces are used with pasta, vegetables, chicken, fish, and eggs.

EGG SAUCE

Egg sauce is an emulsion consisting of butter, egg yolks, and a liquid. The butter is held in suspension in the liquid by the egg yolks. Egg sauces are sometimes called ***butter sauces***. Two popular egg sauces are hollandaise (hol-an-DAYZ) and bearnaise (ber-NAYZ). ***Hollandaise sauce*** is an emulsion of butter, egg yolks, and lemon juice. Because hollandaise sauce easily curdles during preparation, a convenience form which is easy to prepare has become increasingly popular. ***Bearnaise sauce*** is made with minced shallots, crushed peppercorns, and tarragon vinegar.

Egg sauces are extremely perishable. They are a frequent cause of food poisoning in food service establishments. It is best to prepare egg sauces as needed and use them immediately. *Never* add leftover sauce to freshly-prepared sauce. Egg sauces are served with eggs, fish, and vegetables.

BUTTER SAUCE

Butter sauce may be made with cold butter or browned butter. Softened cold butter may be used alone or whipped with mustard, parsley, lemon juice, onion, garlic, or other flavorings. The cold butter sauce may be used immediately, or it may be formed into thin rolls and refrigerated. A small amount of the roll may be broken off and placed on top of hot vegetables, shellfish, or bread. As the butter melts, it forms the sauce.

Browned butter may be light or dark, but, when cooking, it should never be permitted to smoke. Particles resulting from browning should be discarded. In ***meuniere*** (me-ne-AIR) sauce lemon juice and chopped parsley are added to lightly browned butter. Butter sauces are served over vegetables, seafood, and hot bread.

Gravies

Gravies are meat-flavored sauces made from the drippings of roasted meat. They may be thickened or unthickened. When meat is served ***au jus*** (O ZHUS), it is served "with the meat juices" or drippings. These drippings may be thickened to form a ***pan gravy***. The drippings are usually diluted with stock. Variations of pan gravy include brown gravy, cream gravy, giblet gravy, onion gravy, and vegetable gravy. Pan gravies are served with meats and vegetables.

Cold Sauces

Cold sauces are usually prepared with a tomato or mayonnaise base. They are similar to the dressings served on salads. Cold sauces may or may not require cooking.

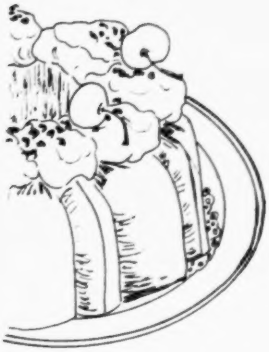
Tomato-based sauces include seafood cocktail sauce and barbeque sauce. Tomato puree, catsup, and chili sauce are common ingredients. They are served with meat and seafood.

Mayonnaise-based sauces include tartar sauce, dill sauce, mustard sauce, and remoulade sauce. Mayonnaise-based sauces are served with appetizers, hors d'oeuvres, dips, and salads.

Sweet-sour sauces are made from a base of fruit, fruit juices, or vinegar. They may be thickened with cornstarch. Sweet-sour sauces should be smooth and transparent. They should have a sweet, slightly tart, but not sour, flavor. Sweet-sour sauces include chutney, raisin sauce, oriental sauce, and Polynesian sauce.

Sweet Sauces

Desserts and some meats are served with a sweet sauce. Sweet sauces may be served either hot or cold. Most sweet sauces can be categorized as whipped creams, sugar syrups, fruit sauces, hard sauces, or egg sauces.



WHIPPED CREAM

Whipped cream is an easily prepared sweet sauce. Chilled whipping cream is beaten until it forms soft peaks. It is usually sweetened with powdered sugar and flavored with vanilla. It must be served immediately.

Toppings such as crushed candies or toasted nuts and cereals may be added for variety. Whipped cream may be purchased in an aerosol can. Whipped cream substitutes are also available in cans or jars.

SUGAR SYRUPS

Sugar syrups are rich sauces like chocolate, butterscotch, and marshmallow. Other sugar syrups are flavored with fruit, vanilla, or maple. Sugar syrups are made by dissolving sugar and flavoring in water or milk and boiling until the desired thickness is reached. Most food service establishments buy canned ready-made sauces. A few prefer to make their own.

FRUIT SAUCES

A variety of fruit sauces are possible. Lemon, orange, cherry, pineapple, raspberry, strawberry, peach, and apricot are all popular. A simple fruit sauce can be made from a ***fruit puree*** such as strawberries or raspberries. The berries are cooked in a small amount of water until soft and forced through a food mill. The puree is sweetened and served on ice cream or cake. Fruit purees are also used as garnishes for meat and poultry dishes. Orange puree may be served with duck, applesauce with ham, and cranberry puree with turkey.

To make a ***cooked fruit sauce***, cornstarch is mixed with sugar, salt, and water before being added to the hot fruit juice. Lemon juice may be added after the mixture thickens. If added before, the acidity of the lemon juice can reduce the thickening power of the cornstarch. If whole or pieces of fruit are used in the sauce, they are added after the juice has thickened. Coloring may be added to make the sauce more appealing.

HARD SAUCES

A ***hard sauce*** is made from butter, confectioner's sugar, eggs, vanilla, and flavoring. Hard sauce is about the texture of butter cream frosting. It is used as a topping for plum pudding, fruitcake, mince pie, gingerbread, or steamed pudding. A fluffy hard sauce is made by blending egg yolks into the butter and sugar. The egg whites are beaten separately until stiff, then folded into the sauce after it is prepared. Hard sauce is frequently flavored with rum or brandy. A pastry bag is usually used to apply the hard sauce to the dessert.

EGG SAUCES

The two most important sweet ***egg sauces*** are foamy sauce and egg custard. ***Foamy sauces*** are rich, uncooked sauces made with beaten egg whites, whipped cream, or both. They are also called ***supreme sauces***. Foamy sauces may be flavored with fruits, extracts, or liqueurs. Cooked strawberries, raspberries, or other juicy fruits may be mixed with the sauce.

Custard sauces are sweetened mixtures of milk and eggs. The sauce is thickened by the eggs or by eggs and starch. Vanilla is the most common flavoring, but chocolate, caramel, and other flavors may be used. A custard sauce should be the consistency of heavy cream. It should be smooth and velvety. Custard is usually prepared in a double boiler to prevent curdling.

Custard mixes are often used in food service. Some contain precooked starch and thicken instantly when milk is added. Others require cooking. Few food service establishments make custard from scratch.

Custard spoils very quickly. Keep it refrigerated except when serving.

Points To Remember

- Stocks are simple, but time-consuming, to prepare. For this reason, convenience stocks are quite popular.
- The basic stocks are white, brown, poultry, and fish. Convenience stocks can be purchased in powdered, granular, liquid, or cube form.
- Soups have either a stock or milk base. Thin soups include bouillon, consomme, and broth. Thick soups include vegetable, cream, and puree.
- Specialty soups are hearty soups meant to be served as meals. They may be made from a stock, milk, or a combination base.
- Cold soups are popular in the summer and include jellied consumme, gazpacho, vichyssoise, borscht, and fruit soup.
- Convenience soups save time and energy. They may be canned or dried. More than 50 varieties are available.
- Hot soups should be served hot, and cold soups should be served cold in pre-chilled dishes. They should be garnished attractively and appropriate accompaniments should be served with soups.
- Soups should be kept above 140°F or below 40°F. Unopened canned and dehydrated soups should be stored in a cool, dry place.
- A sauce is a richly flavored stock or liquid used to complement another food. It may become a part of a dish or be served as an accompaniment.
- Basic sauces are called foundation sauces. The basic sauces are brown sauce, tomato sauce, white sauce, cream sauce, egg sauce, and butter sauce. Other sauces include cold and sweet sauces.
- Gravies are meat-flavored sauces made from the drippings of roasted meat.
- Cold sauces may or may not require cooking. They include tomato-based sauces, mayonnaise-based sauces, and sweet-sour sauces.
- Desserts and some meats are served with a sweet sauce. These include whipped cream, sugar syrups, fruit sauces, hard sauces, egg sauces, and custard sauces.

Words To Know

au jus
Bernaise sauce
borscht
bouillon
brown stock
butter sauce
Hollandaise sauce
jellied consumme
liaison
marinara sauce
mayonnaise-based sauces
menuiere

clarifying
cold sauces
consumme
cooked fruit sauce
cream sauce
custard sauces
egg sauces
fish stock
foamy sauces
foundation sauces
fruit puree
fruit soup
gazpacho
gravies
hard sauce
hard sauce
hearty
mother sauces
pan gravy
poultry stock
puree
raft
roux
sauce
supreme sauces
sweet-sour sauces
tomato-based sauces
tomato sauce
veloute
vichyssoise
whipped cream
white sauce
white stock

Questions For Review

1. List the steps in preparing stocks.
2. Explain the procedure for clarifying stocks.
3. What is each of the following made from?
   white stock
   brown stock
   poultry stock
   fish stock
4. Give two examples of thin soups and ingredients which may be used.
5. What is used to thicken soups?
6. Describe vegetable soups, cream soups, and purees.
7. Name three examples of specialty soups and where they originated.
8. Give two examples of cold soups and explain how they are to be served.
9. Give three examples of ways to garnish soups.
10. How should soups be cooled before refrigerating?
11. For each of the following tell how it is made and give an example of how it is used.
    brown sauce
    tomato sauce
    white sauce
    cream sauce
    egg sauce
    butter sauce

12. How is pan gravy prepared?

13. Name one type of cold sauce and explain how it is prepared.

14. List three sweet sauces, the ingredients used, and when each is used.

19

Chapter Nineteen
Meat, Poultry, and Fish

COMPETENCY TO DEVELOP

- Prepare meats, seafoods, and poultry.

OBJECTIVES TO ACHIEVE

- Define the term entree.
- Identify the types and cuts of meat, poultry, and fish available.
- Identify the forms of meat, poultry, and fish available.
- Describe factors to consider when selecting meat, poultry, and fish.
- Describe procedures for handling and storing meat, poultry, and fish.
- Identify menu uses of meat, poultry, and fish.
- Summarize principles of cookery for meat, poultry, and fish.
- Outline methods for cooking meat, poultry, and fish.
- Name convenience meat, poultry, and fish products available.

The term ***entree*** (ahn-TRAY) refers to the main dish of the meal. The most common entrees feature meat, poultry, or fish.

Meat

Americans eat large quantities of meat. Steaks and hamburgers are especially popular. Many other types of meat are also served in food service establishments.

TYPES AND CUTS OF MEAT

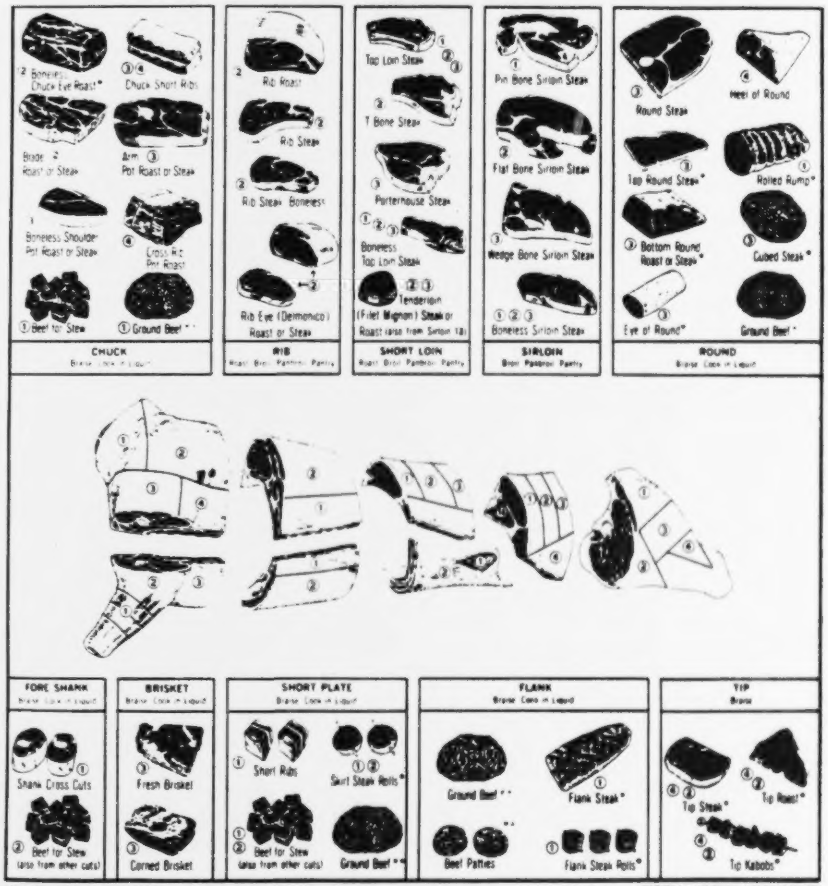
In food service, the term ***meat*** refers to beef, veal, pork, or lamb. ***Beef*** is meat from fully grown steers. ***Veal*** is from baby calves which have been milk-fed. ***Pork*** is the flesh of pigs or hogs. ***Lamb*** is the flesh of young sheep. Meat from these sources is often called ***red meat*** to distinguish it from poultry and fish.

Meat is made of muscle, connective tissues, fat, and bone. ***Muscle*** is composed of fibers. The fibers are held together by ***connective tissue***. The amount of connective tissue affects the tenderness of the meat. The more connective tissue, the less tender the meat is. Fat is found in layers on the surface of the meat and in small flecks or streaks throughout the muscle. The small flecks of fat are called ***marbling***. ***Bone*** is part of the skeleton of the animal. The amount of bone depends on the cut of meat.

An animal ***carcass***, or body, is first cut in half lengthwise. Each half is called a ***side***. The sides may be cut in half to form ***quarters***. On a beef, the quarters are referred to as the ***forequarter*** and the ***hindquarter***. Veal and lamb quarters are referred to as the ***foresaddle*** and ***hindsaddle***. Pork is usually sold as a side, instead of quartered. Each side or quarter is cut into smaller portions called ***wholesale cuts***. These are divided into still smaller pieces called ***retail cuts***. The chart which follows is an example of the wholesale and retail cuts of beef.

BEEF CHART

RETAIL CUTS OF BEEF — WHERE THEY COME FROM AND HOW TO COOK THEM


2 Boneless Chuck Eye Roast*
③④ Chuck Short Ribs
Blade 2 Roast or Steak
Arm ③ Pot Roast or Steak
1 Boneless Shoulder Pot Roast or Steak
④ Cross Rib Pot Roast
① Beef for Stew
① Ground Beef**
CHUCK
Braise, Cook in Liquid
2 Rib Roast
② Rib Steak
② Rib Steak, Boneless
② Rib Eye (Delmonico) Roast or Steak
RIB
Roast, Broil, Panbroil, Panfry
① ② ③ Top Loin Steak
② T Bone Steak
③ Porterhouse Steak
①②③ Boneless Top Loin Steak
②③ Tenderloin (Filet Mignon) Steak or Roast (also from Sirloin 1a)
SHORT LOIN
Roast, Broil, Panbroil, Panfry
① Pin Bone Sirloin Steak
② Flat Bone Sirloin Steak
③ Wedge Bone Sirloin Steak
①②③ Boneless Sirloin Steak
SIRLOIN
Broil, Panbroil, Panfry
③ Round Steak
④ Heel of Round
③ Top Round Steak*
① Rolled Rump*
③ Bottom Round Roast or Steak*
③ Cubed Steak*
③ Eye of Round*
Ground Beef*
ROUND
Braise, Cook in Liquid
FORE SHANK
Braise, Cook in Liquid
① Shank Cross Cuts
② Beef for Stew (also from other cuts)
BRISKET
Braise, Cook in Liquid
③ Fresh Brisket
③ Corned Brisket
SHORT PLATE
Braise, Cook in Liquid
① Short Ribs
①② Skirt Steak Rolls*
①② Beef for Stew (also from other cuts)
Ground Beef**
FLANK
Braise, Cook in Liquid
Ground Beef**
① Flank Steak*
Beef Patties**
① Flank Steak Rolls*
TIP
Braise
④② Tip Steak*
④② Tip Roast*
④② Tip Kabobs*

*May be Roasted, Broiled, Panbroiled or Panfried from high quality beef
**May be Roasted (Baked), Broiled, Panbroiled or Panfried

NATIONAL LIVE STOCK AND MEAT BOARD

The cuts of meat can be classified into three groups–tender cuts, less tender cuts, and variety meats. The tenderness of each cut is related to its location on the animal. ***Tender cuts*** include the loin and ribs of beef, veal, lamb, and pork. They also include the leg of veal, lamb, and pork. ***Less tender cuts*** include the round, rump, flank, and chuck of beef. The shoulder and breast of veal and lamb are less tender cuts. The shoulder of pork is also a less tender cut of meat. ***Variety meats*** include the liver, kidney, heart, tongue, and brains of beef, veal, lamb, and pork. The sweetbreads (the thymus or pancreas) of beef, veal, and lamb are other variety meats. Liver is the most popular variety meat.

The less tender parts of the animal may be cubed or ground. Ground meat is often made from trimmings and unsalable cuts of meat. Ground beef is purchased by the percent of lean to fat. Ground beef may be 70-75 percent, 75-80 percent, or 80-85 percent lean meat. Fat content is limited by law to 30 percent. Hamburger meat is usually, but not always, ground beef. Unless it is labeled "pure ground beef" it may contain some pork. Ground pork is often made into sausage.

FORMS OF MEAT

Meat may be purchased fresh, cured, frozen, or canned.

Fresh meat has received no special treatment other than aging. ***Aging*** refers to hanging the meat under controlled conditions for a period of time. Beef and lamb become more tender and more flavorful when aged. Pork and veal are not improved by aging.

Cured meat has been treated with a mixture of salt, sugar, and spices, and is often smoked. Ham, sausages, lunch meats, bacon, Canadian bacon, and dried beef are cured meats.

Frozen meats may be either raw or cooked. Frozen meat may be purchased boxed, preportioned, and ready for use.

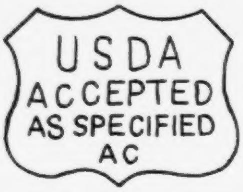
Canned meat is usually fully cooked and sealed in containers which may be stored without refrigeration. Popular canned meats include ham, dried beef, and corned beef.

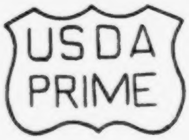
SELECTING MEATS

Selection of meats for use in food service is based on quality standards. Quality is indicated by United States Department of Agriculture (USDA) inspection and grading and by the tenderness and appearance of the meat.

Inspection and Grading

The first sign of quality is the official United States Department of Agriculture stamp. The USDA stamp ensures that the meat is whole-





some. The stamp indicates that the meat came from a healthy animal and that the processing plant itself met minimum federal standards of sanitation.

The next sign of quality is the shield-shaped grade stamp or label. The USDA ***quality grades*** are Prime, Choice, Good, Standard, Commercial, and Cutter. Meat which is not shipped from one state to another is not required to be graded. However, many meat packers have their meat graded anyway.

Quality grades are based on three things–conformation, quality, and finish. ***Conformation*** refers to the proportion of meat to bone and other less desirable or inedible parts. ***Quality*** is primarily determined by the amount of marbling in the meat. ***Finish*** refers to the distribution of fat on the outside and throughout the meat.

Tenderness

The tenderness of meat is one indication of quality. The cut of meat is one indication of tenderness. The size and shape of the bone in the cut aids in identifying the location from which the cut was taken. Bones are one of four shapes–round, long, curved, and T-shaped. A round bone indicates that the cut of meat was taken from an arm or leg section. Round bones are found in less tender cuts of meat. Round steaks and arm roasts have round bones. A long, thin, flat bone indicates that the cut was taken from the top part of the leg or arm. If taken from the leg, the cut is a sirloin. If taken from the arm, it is a blade cut. A curved, thin bone indicates that the meat was cut from the rib section. Rib roasts and steaks have curved, thin bones. A T-bone indicates a loin cut. Club, T-bone, and porterhouse steaks have T-shaped bones. Long, curved, and T-shaped bones are found in more tender cuts of meat.

Some meats are tenderized by a chemical which breaks down the connective tissue. These meats are more tender than other meats. The tenderizing chemical is injected into the animal shortly before it is slaughtered and is carried throughout the animal's body in the bloodstream.

Appearance

The appearance of the meat is another good indicator of quality. Beef should be bright red in color. It should have firm white fat on the outside and thin streaks or flecks of fat (marbling) evenly distributed throughout. The muscle or lean should be velvety and fine grained. The bones should be white and hard with a little red in the center.

Veal should be pink with very little fat. The bones should be soft and slightly red in the center. Veal has a lot of connective tissue.

The appearance of pork depends on whether it is fresh or cured. Fresh pork should be grayish pink with soft, creamy-white fat. The bones should be hard and slightly reddish. Cured pork should be bright pink.

Lamb should be deep red with brittle, white fat. It has soft reddish bones.

HANDLING AND STORAGE

Both raw and cooked meats spoil quickly. To prevent spoilage, meat should be properly handled and stored. Store fresh meat loosely covered in the coldest part of the refrigerator for not more than three days. Store prepackaged meat in the original wrapping for no more than two days. Store cured and ready-to-eat meats in the refrigerator tightly wrapped.

Store frozen meats at 0°F in their original wrapping. Thaw frozen meats in the refrigerator. Use thawed meat immediately. Do not refreeze thawed meat. Frozen meat roasts and steaks may be taken directly from the freezer and cooked. Frozen meat loses juice as it is thawed and will become dry during cooking.

Store most canned meats in a cool, dry storage area. Store canned hams weighing over 1 1/2 pounds in the refrigerator. Store leftover meats tightly wrapped or in a covered container in the coldest part of the refrigerator and use quickly.

MENU USES OF MEATS

Meats have a variety of menu uses. Used alone they are often the main dish of a meal. Meats such as steaks, roasts, and chops, are popular for dinner. For lunch or supper, servings are smaller and meats are often mixed with other foods to create a lighter main dish. Foods such as macaroni, noodles, spaghetti, rice, and vegetables may be combined with meat to create a main dish. Casseroles, soups, salads, and sandwiches containing meat are used as main dishes. Popular breakfast meats include sausage, bacon, and ham.

PREPARATION OF MEATS

Meat requires little preparation before cooking. Different methods of cooking are used for tender and less tender cuts of meat.

Tenderizing

Less tender cuts may be tenderized by chemical or physical means or by cooking. A commercial powder or liquid tenderizer containing the enzyme, ***papain*** (pah-PA-in), may be used to chemically break down the connective tissue in the meat. Another chemical means for tenderizing meat is by marinating. In ***marinating***, the meat is soaked for several hours in an acid food like tomatoes, vinegar, or lemon juice to break down the connective tissue.

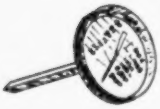
Connective tissue can be broken down physically by cutting, grinding, scoring, or pounding the meat. ***Scoring*** is done by making shallow cuts across connective tissues. ***Pounding*** is done with a mallet which has sharp points to break down the connective tissue.

Cooking

Cooking improves the flavor, appearance, and tenderness of meats. It also destroys harmful microorganisms. Cooking coagulates or hardens, the protein in the lean part of the meat while it softens the protein in the connective tissues.

Meat should be cooked at a low temperature until just done. Cooking at a high temperature and overcooking harden both meat fibers and connective tissue and result in excessive shrinkage.

Testing Doneness



The degree of doneness desirable varies with the type meat. Beef and lamb may be served rare (135°F.), medium (140°F.), or well-done (160°F). Pork and veal should always be cooked well-done. Pork may harbor the parasite, ***trichina*** (trik-EYE-nuh). This parasite causes a disease in humans who eat infected pork called ***trichinosis*** (TRIK-uh-NO-sis). Although the disease is rare today, pork should always be cooked to an internal temperature of 165°F. Veal is cooked well done (170°F.) because it has so much connective tissue.

METHODS OF COOKING MEAT

Meat may be cooked with dry or moist heat. It may also be cooked in fat.

Cooking with Dry Heat

Dry heat is used for cooking tender cuts of meat. Roasting, broiling, and grilling or panbroiling are dry-heat methods of cooking meat. In these methods, no water is used, and the meat is left uncovered as it cooks.

Roasting or baking meats is done in the oven at 300 to 350°F without the addition of moisture. A meat thermometer may be used to tell when the desired degree of doneness is reached.

In ***broiling***, the meat is cooked by direct heat from hot coals, a gas flame, or a glowing electric element. The cooking temperature is controlled by the distance the meat is placed from the heat source.

Meat is ***grilled*** or ***panbroiled*** by placing it on the solid surface of the grill or in a hot pan. Usually no additional fat is needed.

Cooking with Moist Heat

Moist heat is used for cooking less tender cuts. Braising and cooking in liquid are moist heat methods of cooking meat. Moist heat methods tenderize the meat by cooking it slowly in moisture at low temperature. Meats may be browned before braising and stewing to improve their flavor and color.

Braising is cooking meats in their own juices or with a small amount of added liquid. ***Fricasseeing*** is another name for braising. Examples of braised meats include braised beef short ribs, Swiss steak, pepper steak, and beef pot pie.

In ***stewing*** the meat is covered with water or other liquid. The meat is simmered, or stewed until tender. Less tender cuts of meat and variety meats are cooked by this method.

Cooking with Fat

Sauteeing or panfrying and deep fat frying are ways to cook meat in fat. To ***saute*** (so-TAY) or panfry meat, only a small amount of fat is used. Meat may be sauteed before being cooked by another method. In ***deep-frying***, the meat is floated in hot fat. Deep-fat frying is also called French frying. ***Oven frying*** may be substituted for deep-frying when large quantities of food are to be prepared. In this method, breaded meats are drizzled with fat while baking. The resulting products look and taste much like they were deep-fried.

Poultry

Poultry is the term used for domestic birds raised for food. Common types of poultry include chickens, turkeys, ducks, and geese. Chicken and turkey are the types of poultry most often used in food service.

CLASSIFICATION OF POULTRY

Poultry is usually classified by its method of cooking. Age and sex of the bird are the primary factors affecting tenderness and flavor. Older birds are less tender, but more flavorful, than younger birds.

Chicken

Chickens are classified as broilers, fryers, roasters, capons, or stewing chicken. ***Broilers*** are very young birds of either sex weighing 1 to 2 1/2 pounds. They are small in size, and have little meat in proportion to the bone. Broilers are usually halved, each half being served as a portion.

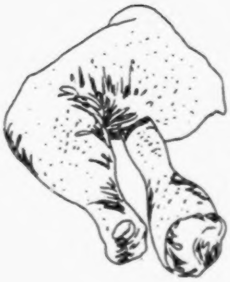
Fryers are young birds of either sex weighing 21/2 to 31/2 pounds. They are meaty and have some fat beneath the skin. Fryers are usually quartered or cut into smaller serving pieces depending on their size and use.

Roasters, capons, and stewing hens are less tender than broilers and fryers. ***Roasters*** are male birds weighing over 31/2 pounds. They are very meaty and have a layer of fat beneath the skin. Roasters are usually cooked whole. They may be roasted or braised. ***Capons*** are male chickens that have been desexed. They weigh 4 to 7 pounds. They have a high proportion of white meat and are usually roasted. ***Stewing hens*** are heavy, mature birds weighing 4 to 6 pounds. The meat is flavorful, but less tender than that of younger birds. Stewing hens are usually braised or stewed.

Turkey

Turkeys are classified as either broilers or roasters. Broilers are young turkeys of either sex. They usually weigh 3 to 7 pounds and have little fat. Roasters are a little older than broilers. Roaster hens (females) weigh 3 to 15 pounds. Roaster toms (males) weigh 8 to 25 pounds. Roasters have more fat than broilers. Hens have more fat than toms.

MARKET FORMS OF POULTRY



Poultry may be purchased either whole or in parts. It is available fresh, frozen, or canned.

Fresh poultry is sold dressed and ready to cook. It may be sold whole, in half, or in pieces such as breasts, legs, and thighs. Food service operations frequently order boxes of poultry preportioned into servings. Chicken is often purchased in preportioned breaded pieces ready to be fried.

Whole birds such as turkeys and Cornish hens are often sold frozen. Pieces and cooked poultry entrees are also sold frozen.

Canned poultry may be purchased whole, cut into pieces, or boned and canned. Canned poultry items include chicken, turkey, and speciality foods such as chicken chow mein or turkey a la king.

POULTRY INSPECTION AND GRADING

Like beef, pork, veal, and lamb, all poultry shipped between states must be inspected and approved by the United States Department of Agriculture. The symbol of approval may be a metal disk clipped to the bird's wing, a paper tag stuck on the bird, or a printed emblem on the wrapping.

Grading of poultry by the USDA is voluntary. Poultry grading uses the letters A, B, and C to denote quality. The highest quality is indicated by the letter A.

Federal poultry grading is based on five factors: conformation, fleshing, fat, cleanliness, and condition. ***Conformation*** refers to the general form, shape, and body contour of the bird. A check of the bird's ***fleshing*** indicates whether the flesh is plump, and firm-looking. The amount of fat beneath the skin is checked. To meet ***cleanliness*** standards, the skin should be free from pin feathers and down. A check of the bird's ***condition*** should indicate that the bird is free from tears, cuts, bruises, blemishes, or defects such as disjointed or broken bones.

Grade A poultry is well-finished, full-fleshed, and meaty with few blemishes or pinfeathers. Grade B indicates a good quality poultry which is slightly less meaty. Grade C poultry has less flesh and fat than the higher grades.

HANDLING AND STORAGE OF POULTRY

Poultry is a very perishable food. It should be handled carefully from the time it arrives in the food service establishment until it is served.

Fresh poultry should be lightly wrapped before refrigeration. The wrapping should not be tight enough to prevent air circulation around the poultry. It should be stored in the coldest part of the refrigerator. The poultry should be used in 2 to 3 days.

Poultry may be stored for up to one year if it is wrapped tightly and frozen at 0°F. Although it is not necessary to defrost frozen poultry before cooking, thawing will make the cooking more uniform throughout. Thawing also shortens the cooking time and makes it easier to judge the amount of time needed. Therefore, poultry is usually cooked after thawing.

Store canned poultry in a cool dry place. Opened cans and leftover cooked poultry must be stored in the refrigerator in a tightly covered container.

MENU USES OF POULTRY

The menu uses of poultry are varied. Chicken has recently gained popularity in fast food establishments in the form of chicken "bits" or "nuggets." Sliced chicken and turkey are common sandwich ingredients. Roasted turkey is the traditional entree for Thanksgiving dinner. Fried chicken is a standard menu item in most restaurants in the southern part of the United States. Baked chicken is also popular as an entree. Specialty poultry entrees include Cornish hen, pheasant, and duck. Stewed chicken is an ingredient in many casseroles. The white meat of chicken and turkey is also popular as a main dish salad ingredient.

PREPARATION OF POULTRY

The poultry purchased by food service establishments requires very little pre-preparation. The methods used to cook poultry include broiling, frying, oven frying, roasting, braising, fricasseeing, and stewing.

Pre-Preparation

The amount of pre-preparation needed by poultry depends largely on whether the birds must be portioned before use. If portioning is necessary, the birds may be halved, quartered, or disjointed into 10 to 12 pieces.

Some birds have a few pinfeathers which must be removed. Pinfeathers are small feathers that have not fully emerged from the skin of the bird. They may be removed using a sharp knife. Insert the knife blade under the feather. Place the thumb on top of the feather and pull it out.

When poultry is purchased, the neck and giblets are in the body cavity. The giblets are usually wrapped in paper. ***Giblets*** (JIB-let) are the edible internal organs including the liver, heart, and the gizzard. These should be removed from the body cavity before the bird is cooked.

Poultry should be thoroughly washed under cold running water. It should be well-drained before cooking.

Cooking

The classification of poultry gives a good indication of the appropriate methods of cooking. Very young chickens and turkeys may be broiled. Very young chickens can also be fried. Fully mature chickens and turkeys can be roasted. Broiling and roasting are dry heat methods of cooking. Older mature chickens should be braised, fricasseed, or stewed. Braising or fricasseeing, and stewing are moist heat methods of cookery.

For broiling, very young chickens and turkeys are used. Depending on their size, chickens may be halved or quartered for serving. Turkeys are usually quartered. The wing should be folded back on the shoulder to hold it in place. The pieces should be placed on the broiler skin side down. Chickens should be basted often with fat while broiling and turned often to ensure even browning. Chickens are often basted with barbecue sauce while broiling.

Poultry may be ***fried*** in several ways. It may be deep-fat or French fried. It may also be ***pan fried*** in a small amount of fat. Chicken may be prepared for frying in several ways. It may be rolled in flour, in egg and bread crumbs, or dipped into a batter.

Roasting is the same for poultry as for meats. Tender poultry such as chicken, turkey, and duck can be roasted on a rack in a shallow pan.

The bird should be placed breast side up. No water or cover is needed. Poultry is roasted at a low temperature, 250-325°F., depending on its size. The larger the bird, the lower the temperature. Poultry should be roasted until the internal temperature is 185°F. This requires about 20 minutes per pound at 325°F. or 30 minutes per pound at 250°F.

Large birds are trussed before roasting. ***Trussing*** means tying the legs and wings close to the body. This keeps the bird in shape during roasting. It also prevents the legs and wings from drying out.

Braising or fricasseeing is appropriate for slightly older birds than the ones used for roasting. The chicken is quartered or disjointed. It is then dredged in flour, bread crumbs, or some other browning agent. It is browned uncovered in a small amount of fat. Then a small amount of water is added and the pan is covered. The cooking continues over low heat on top of the range or in the oven at 325°F. until the chicken is tender. The cover may be removed for the last few minutes to make the chicken crisp.

Older poultry may be tenderized by stewing. The bird may be stewed whole or in pieces. The bird is placed in a kettle and barely covered with water. Seasonings such as salt, pepper, herbs, spices, and vegetables are added. The bird is simmered below the boiling point for three or four hours until the meat is very tender. The meat may be removed from the bones and used to make salads, sandwiches, and casseroles. The liquid from the stewed bird is used for soups, sauces, or gravies. A pressure cooker may be used for stewing to save time.

CONVENIENCE POULTRY PRODUCTS

Poultry is available in a variety of convenience forms. Being ready-to-cook is a convenience we expect in fresh poultry today. Portioned poultry is another common convenience. Breading adds additional convenience.

Canned poultry items include the canned whole bird, cut pieces, boneless meat, sandwich spreads, soups, and prepared specialties such as turkey a la king. Dehydrated chicken soups are also available.

Frozen convenience poultry items are also widely available. These items include birds stuffed with dressing, frozen pieces or parts, and breaded cuts. A variety of frozen specialty items are also available.

Fish

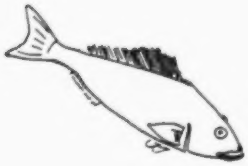
The ***fish*** served in food service includes both finfish and shellfish. ***Finfish*** have a bony skeletal structure and fins. Finfish are found in both salt water and fresh water. Bluefish, cod, flounder, haddock, halibut, snapper, sole, and whiting are salt water fish. Catfish, brook trout, and whitefish are fresh water fish. Some fish migrate between the two. Salmon, for example, are born in fresh water, migrate to salt water, then return to the fresh water to spawn or lay eggs.

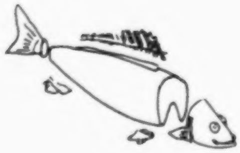
Finfish vary in the color of their flesh and in amount of fat. The flesh of raw fish is very pale. The color is related to the amount of fat. The fat in finfish varies from one to twenty percent. Fish that have more fat usually have a yellowish tinge. Fat fish include mackerel and chad. Salmon and trout, which are fat fish, are a delicate pink. Fish with little fat have blue-white flesh. Some lean fish are cod, flounder, and halibut. The method of cooking fish is influenced by the amount of fat.

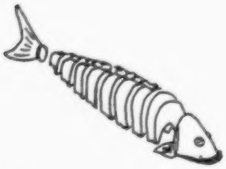
Saltwater fish are more popular in food service than freshwater fish. Saltwater fish have fewer, but larger bones than freshwater fish. Saltwater fish are also usually less expensive than freshwater fish.

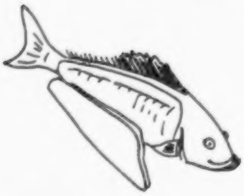
Shellfish have a soft body with no spinal column or fins. There are two types of shellfish–crustaceans and mollusks. ***Crustaceans*** have a crust-like shell and segmented bodies. Shrimp, crabs, crayfish, and lobsters are crustaceans. ***Mollusks*** have soft, unjointed bodies. Most have a hard, hinged shell. Clams, oysters, mussels, and snails are mollusks which have hard shells. Squid and octopus do not have shells. Scallops are the muscle that open and close the shell of a certain mollusk.

MARKET FORMS OF FISH









Fish may be purchased fresh, frozen, canned, cured, dried, and freeze-dried.

Fresh finfish may be purchased in several forms–whole, dressed, steaks, and fillets. ***Whole*** fish is sold just as it is taken from the water with the intrals in tact. ***Dressed*** fish is a whole fish with the internal organs, scales, head, tail, and fins removed. ***Steaks*** are cross section slices from a large dressed fish. ***Fillets*** (fil-AY) are boneless lengthwise cuts from the sides of the fish along each side of the backbone. If a piece of skin is left to hold the two sides together, the cut is called a ***butterfly***. The shape of the piece resembles a butterfly. Only small, thin fish can be butterflied.

Frozen finfish is available in preportioned sticks, squares, rectangles, and fillet-shaped pieces. They may be breaded. They may be raw or precooked.

Fish which has been salted, smoked, or pickled is referred to as ***cured fish***. Examples of cured fish include salted cod, smoked mackerel, and kippered herring.

The market forms of each kind of shellfish is different. Shrimp may be purchased fresh or frozen, raw or cooked. They may be purchased in the shell or peeled. Shrimp have a black strip along the back called a sand vein. Shrimp may be purchased with this vein in tact or removed (de-veined). Shrimp may also be purchased canned or freeze-dried.

Most lobsters and crabs are purchased alive. They may also be bought fresh, cooked, frozen, or canned. Fresh or frozen whole lobsters or lobster tails may be purchased.

Oysters and clams may be purchased alive in the shell by the dozen, the bushel, or the barrel. Oysters and clams may also be purchased ***shucked*** (removed from the shell) by the pint, quart, or gallon. Small oysters or clams are standard grade. Larger ones are called select. Frozen and canned oysters, clams, and scallops are also available.

Both finfish and shellfish are available canned. Popular canned finfish include salmon, tuna, and sardines. Canned shellfish include oysters, clams, lobsters, crab, scallops, and shrimp.

SELECTING FISH

The inspection and grading of fish for wholesomeness is voluntary. The grading program is supervised by The U.S. Department of Commerce. Inspected fish are identified with an inspection stamp which indicates its quality. Fish are usually graded as U.S. Grade A, U.S. Grade B, and Substandard.

The freshness of finfish can be judged by several characteristics. Whole fish should have bulging, bright, clear eyes, bright red gills, and scales that cling tightly to the skin. The flesh of the fish should be firm and springy. No dent should result when the skin is pressed. There should be no disagreeable odor.

Shellfish should have the following characteristics. Shrimp should be odorless and its shell should be firmly attached. Shucked oysters and clams should be plump and creamy in color. The liquid they are in should be odorless and clear. The shells of live clams and oysters should be tightly closed or should close when touched. The tail of a live lobster should snap back quickly after is is flattened out. Scallops should be white, creamy white, or pinkish in color.

Frozen fish should be solidly frozen in packages which show no sign of being thawed or refrozen.

MENU USES OF FISH

Like meat, fish may be the main dish of a meal. It may be served alone, stuffed, or skewered. It may be combined with other foods to make salads, sandwiches, casseroles, creamed dishes, sauces, or crouquettes. It may be the main ingredient of soups such as fish chowder, oyster stew, or lobster bisque. Fish is popular for both lunch and dinner main dishes.

Fish can also be served as an appetizer. Shrimp, lobster, and crab are used in seafood cocktails. Dips can be prepared using fish. Some people eat raw oysters or clams. Pickled and smoked fish are also served as appetizers.

HANDLING AND STORAGE OF FISH

All fish is extremely perishable. Fresh fish should be wrapped in waterproof wrap and placed on top of ice and refrigerated. The fish should not rest in water. Fresh fish should be used within 24 hours after purchase. Smoked fish should also be refrigerated. Fish should be stored away from other products to prevent absorption of tastes and odors.

Frozen fish can be stored in its original package in the freezer or refrigerator. Frozen fish should be kept at 0° F. until it is defrosted. Many fish can be prepared without defrosting. To thaw fish, place it in the refrigerator and use it immediately after it is thawed. Never refreeze fish that has been thawed. Freezing doesn't kill bacteria, it just slows the growth and reproduction. Fish is *very* perishable. When it thaws the bacteria reproduce rapidly. Also there is a loss of food value due to loss of fluids from the tissue. Flavor, color, and texture are affected by this as well.

Canned fish should be stored in a cool, dry place. Once opened, the contents should be placed in a covered container and refrigerated. Canned fish should be used the day it is opened.

METHODS OF COOKING FISH

The methods of cooking fish depend on the type of fish being cooked, the state (frozen, fresh) of the fish, the amount of fat the fish contains, and the preparation required before cooking. Other factors may also influence the method of cooking used.

Pre-preparation

Some restaurants purchase finfish already prepared and ready to use. Other food service operations prepare them on the premises.

Lobsters and crabs should be kept alive until cooked. Shrimp are usually deveined after cooking. Live clams should be soaked in salty water for fifteen to twenty minutes, then rinsed repeatedly until they are free of sand.

Live oysters and clams to be served on the half shell should be opened with a clam or oyster knife at the thinnest part. Insert the tip of the knife where the shell meets. Twist the knife, forcing the shell to open. Cut the muscle holding the clam or oyster to the shell. Place on a bed of ice and refrigerate.

Cooking

Finfish are cooked by baking, poaching, steaming, broiling, sauteeing, and deep-fat frying. The method of cooking is most influenced by the amount of fat. Fat fish are usually cooked by broiling, barbecuing, or baking. Lean fish are better for steaming, sauteeing, and deep-frying.

The cooking method for finfish is also influenced by the size and thickness of the piece. Large, whole fish may be baked or stuffed. They may also be steamed or poached. Small, whole fish may be sauteed or panfried. Fish steaks and fillets may be broiled, sauteed, baked, or fried.

Because fish is naturally tender, it cooks quickly. Cooking improves the appearance of fish and brings out its flavor. Use moderate cooking temperatures to prevent the protein in the fish from becoming tough. Fish is cooked when the flesh looks milky and separates easily with a fork. Overcooking makes shrimp tough, tasteless, and dry.

Appropriate cooking methods for shellfish vary. The largest shrimp are usually fried or boiled. Medium size shrimp are usually boiled or steamed and served whole and cold as shrimp cocktail or on a salad. Small shrimp are used in casseroles or salads. Regardless of the cooking method used, care should be taken not to overcook shrimp.

Lobsters may be boiled, broiled, baked, sauteed, or deep-fried. Lobsters can be stuffed before baking. Crab is boiled or deep-fried. Scallops may be sauteed or deep-fried. Clams may be breaded and fried in deep fat whole, in strips, or diced and shaped. Oysters may be baked, stewed, or fried.

CONVENIENCE FISH PRODUCTS

A variety of convenience fish products are available. The convenience forms of frozen fish include frozen fillets, steaks, fish sticks, fish pies, chowders, and a variety of other processed fish products. Frozen processed fish products may be breaded and ready-to-cook, or they may be precooked and require only heating before serving.

Canned fish may be used as it comes from the can in salads and sandwiches. It may also be used as an ingredient in any recipe that calls for cooked fish. Smoked fish are ready-to-eat.

Points To Remember

- The term entree refers to the main dish of the meal. The most common entrees feature meat, poultry, or fish.
- The term meat refers to beef, veal, pork, or lamb. It is made of muscle, connective tissue, fat, and bone.
- An animal carcass, or body, is cut into sides, quarters, or cuts. The three classifications of cuts are tender cuts, less tender cuts, and variety meats.
- Meat may be purchased fresh, cured, frozen, or canned.

- Selection of meats for use in food service is based on quality standards. Quality is indicated by United States Department of Agriculture (USDA) inspection and grading and by the tenderness and appearance of the meat.
- USDA quality grades are Prime, Choice, Good, Standard, Commercial, and Cutter. Quality grades are based on conformation, quality, and finish.
- The cut of meat is one indication of tenderness. Some meats are tenderized by a chemical which breaks down the connective tissue, or physically by cutting, grinding, scoring, or pounding the meat.
- The appearance of beef, veal, pork, and lamb is another good indicator of quality.
- Both raw and cooked meats spoil quickly. To prevent spoilage, meat should be properly handled and stored.
- Meats have a variety of uses. They may be used alone as the entree or mixed with other foods to create a lighter main dish.
- Meat requires little preparation before cooking. Different methods of cooking are used for tender and less tender cuts of meat. Cooking improves the flavor, appearance, and tenderness of meats.
- The degree of doneness desirable varies with the type meat. Beef and lamb may be served rare, medium, or well-done. Pork and veal should always be cooked well-done.
- Meat may be cooked with dry or moist heat, or cooked in fat. Dry heat methods include roasting, broiling, grilling, and pan-broiling. Moist heat methods are braising and stewing. Sauteeing, deep-frying, and oven frying are ways to cook in fat.
- Poultry is the term for domestic birds raised for food. Common types of poultry include chickens, turkeys, ducks, and geese.
- Chickens are classified as broilers, fryers, roasters, capons, or stewing chickens. Turkeys are classified as either broilers or roasters.
- Poultry may be purchased either whole or in parts. It is available fresh, frozen, or canned.
- All poultry shipped between states must be inspected and approved by the USDA. Grading of poultry by the USDA is voluntary, and is based on conformation, fleshing, fat, cleanliness, and condition.
- Poultry is very perishable, but may be stored for up to one year if it is wrapped tightly and stored at 0°F.
- The poultry purchased by food service establishments requires very little pre-preparation. The methods used to cook poultry include broiling, frying, oven frying, roasting, braising, fricasseeing, and stewing.

- Poultry is available in a variety of convenience forms. Portioned, breaded, canned, and frozen are examples of poultry in convenience forms.

- The fish served in food service includes both finfish and shellfish. Finfish include both fresh and saltwater fish. Shellfish are classified as crustaceans and mollusks.

- Fish may be purchased fresh, frozen, canned, cured, dried, and freeze-dried.

- The inspection and grading of fish for wholesomeness is voluntary.

- Fish may be the main dish of a meal or it can also be served as an appetizer.

- All fish is extremely perishable and guidelines should be followed in handling and storage.

- Some fish is purchased already prepared while others must be prepared at the restaurant. Finfish are cooked by baking, poaching, steaming, broiling, sauteeing, and deep-fat frying. Appropriate cooking methods for shellfish vary.

- A variety of convenience fish products are available. Fish may be frozen, breaded, precooked, canned, or smoked.

Words To Know

aging
beef
bone
braising
broilers
broiling
butterfly
canned meat
capons
carcass
cleanliness
condition
conformation
connective tissue
crustaceans
cured fish
cured meat
deep frying
dressed
entree
fillets
finfish
finish
fish
fleshing
lamb
less tender cuts
marbling
marinating
meat
mollusks
muscle
oven frying
pan-broiled
pan-fried
papain
pork
poultry
pounding
quality
quality grades
quarters
red meat
retail cuts
roasters
saute
scoring
shucked
side
steaks

forequarter
foresaddle
fresh meat
fricasseeing
fried
frozen meats
fryers
giblets
grilled
hindquarter
hindsaddle
stewing
stewing hens
tender cuts
trichina
trichinosis
trussing
variety meats
veal
whole
wholesale cuts

Questions For Review

1. Describe the source of each of the following.
   a. beef
   b. veal
   c. pork
   d. lamb

2. List and describe two structural parts of meat.

3. Describe how an animal carcass is divided into cuts.

4. Give examples of tender cuts, less tender cuts, and variety.

5. What is "pure ground beef?"

5. List and describe two of the four forms of meat.

7. On what characteristics are quality grades based?

8. Name the part of the carcass from which each of the following bone cuts is taken and label each cut as tender or less tender.
   a. round
   b. long
   c. curved
   d. T-shaped

9. Describe the appearance of quality meat for each of the following.
   a. beef
   b. veal
   c. pork
   d. lamb

10. Describe handling and storage of fresh, frozen, and canned meats.

11. Name three ways meat may be tenderized.

12. What is the principle of meat cookery?

13. Why is it important that pork be cooked well-done?

14. Describe the procedure for dry-heat cooking. What type of meat is best when cooked this way? Name three examples for these methods.

15. Describe the procedure for moist heat cooking. What type of meat is best prepared this way? Name two examples of this method.

16. Describe three ways to cook with fat.

17. Describe each of the following types of chicken.
    a. broilers
    b. fryers
    c. roasters
    d. capons
    e. stewing hens

18. Describe the three market forms of poultry.

19. Name the five factors on which federal poultry grading is based.

20. Describe the storage of fresh, frozen, and canned poultry.

21. What are giblets and what should be done with them before cooking poultry?

22. Name an appropriate method of cooking the following.
    a. very young chickens
    b. very young turkeys
    c. fully mature turkeys
    d. older mature chickens
    e. older poultry

23. What is trussing?

24. Name two convenience poultry products.

25. Give an example of each of the following:
    a. saltwater finfish
    b. freshwater finfish
    c. crustaceans
    d. mollusks

26. Describe three forms of fresh fish.

27. What is cured fish?

28. Name the characteristics of fresh finfish and shellfish.

29. Describe the storage procedure for fresh, frozen, and canned fish.

30. Describe the preparation of lobsters, shrimp, and oysters.

31. Describe the different methods used in cooking fat and lean fish.

32. Name three convenience fish products.

20

Chapter Twenty
Eggs and Cheese

COMPETENCIES TO DEVELOP

- Prepare eggs and egg dishes.
- Prepare cheese and cheese dishes.

OBJECTIVES TO ACHIEVE

- Outline criteria for selecting eggs.
- Identify menu uses of eggs.
- Describe various methods of preparing eggs.
- Describe uses of eggs as ingredients.
- Describe ways to use eggs as garnishes.
- Identify convenience egg products available.
- Describe procedures for serving and garnishing eggs.
- Summarize procedures for holding and storing eggs and egg dishes.
- Identify various kinds of cheese.
- Outline criteria for selecting cheese.
- Identify menu uses of cheese.
- Describe procedures for preparing cheese and cheese dishes.
- Summarize procedures for holding and storing cheese and cheese dishes.

Eggs and cheese are important both as main dishes and as ingredients. In addition, both can be used to garnish other foods.

Eggs

Eggs are used in a variety of ways in cooking. As main dishes, they are especially popular at breakfast. As ingredients, they have a variety of functions.

SELECTION OF EGGS

Eggs are one of the most versatile foods available. They are naturally prepackaged and premeasured. An egg consists of a white ***(albumen)*** (al BYOO muhn) and a yellow portion ***(yolk)*** contained in a shell. The yolk is held in place by the ***chalaza*** (kuh LA zuh), twisted, cordlike strands of heavy egg white. In the large end of the egg is an ***air cell***. A freshly laid egg has no air cell. As moisture evaporates from the egg, the air cell is formed. The older the egg, the larger the air cell.

The shell of the egg is porous. It permits moisture and gases to pass through. On the outside of the shell, a thin film called the ***bloom*** helps to seal the pores and protect the egg from contamination. The color of the shell may be white to brown depending on which breed of chicken laid the egg. The color of the shell does not affect its quality or nutritive value.

Grade and Size

Most eggs are graded for freshness and size. ***Freshness*** refers to the quality of the eggs, not their age. The standards for judging the quality or freshness of eggs were established by the United States Department of Agriculture (USDA).

The freshness of the egg is judged by a process called ***candling***. The candling process involves placing the egg in front of a strong light beam in a darkened room. Moving the egg in front of the light makes it possible to determine the thickness of the white, the size and position of the yolk, and the size of the air space. The freshest egg has a thick white. The white supports the rounded, firm yolk. The air space at the wide end of the egg is small. The freshest eggs are Grade AA, followed by Grade A and Grade B. The difference in grade is based on the characteristics of the white, yolk, and air space. Lower grade eggs have less thick white, the yolk is not as rounded or firm, and the size of the air space increases.

The size of the egg is not related to its quality. The size of eggs is based on their weight per dozen. Pee wee eggs weigh only 15 oz. per dozen while jumbo eggs weigh 30 oz. per dozen. The six egg sizes established by the USDA are peewee, small, medium, large, extra large, and jumbo. The difference between the minimum weight for two sizes is 3 oz. Most recipes were developed to use large or medium eggs. To avoid variation in egg size, measure the amount of egg. For example, 125 milliliters or 1/2 cup is the standard recipe measure for one egg. Using eggs of a certain size or measuring the amount of egg eliminates variations in recipe results.

Forms Available

Eggs may be purchased fresh, frozen, and dried. Whole eggs, whites, and yolks may be processed in liquid, frozen, and dried forms.

Fresh eggs may be purchased in the shell. Fresh, whole eggs are usually purchased by the dozen. A box of eggs contains fifteen dozen eggs. The boxes are labeled with the grade and size of the eggs and the USDA emblem. Fresh, whole eggs are washed before packaging. After washing, the eggs are sprayed with a fine mist of oil to reseal the pores and prevent loss of moisture through the shell.

Fresh eggs in liquid form may be purchased in cans. They may be purchased as liquid whole eggs, yolks only, or whites only. A 30-lb. can will hold about 300 whole eggs, 670 egg yolks, or 540 egg whites. Liquid eggs can be purchased with different amounts of yolks and whites. ***Fortified eggs*** are a mixture with more egg yolks than egg whites.

Frozen eggs are often cheaper than liquid whole eggs. Frozen eggs may be purchased whole, yolks only, or whites only. They may also be purchased with different amounts of yolks and whites. Frozen eggs must be kept frozen until ready to be thawed and used.

Thawed frozen eggs and reconstituted dried eggs are highly perishable. Careful handling is essential to prevent contamination. Store frozen eggs in the freezer at 0°F or below. Thaw frozen eggs in the refrigerator, or, to speed thawing, place the container under cold running water. Use thawed eggs immediately, or refrigerate in an airtight container and use within 24 hours.

Dried eggs are available whole, yolks only, or whites only. Dried eggs are ***vacuum-packed***, packed without air. Store unopened packages of dried eggs in a cool dry place, or in the refrigerator. The temperature should be no more than 50°F. After opening, refrigerate any unused portion in a container with a tight lid. Reconstitute only the amount needed at one time. Reconstitute as directed or sift with dry ingredients. Use reconstituted eggs immediately, or refrigerate in an airtight container and use within one hour.

MENU USES OF EGGS

Eggs may be served at any meal of the day. Fried eggs, scrambled eggs, and poached eggs are popular for breakfast. Boiled eggs are often used in sandwiches and salads for lunch. Omelets may be served at any meal. Quiche, crepes, and souffles are popular for lunch or a light supper. In addition, many popular foods are made with eggs. Egg drop soup, eggnog, banana cream pie, eclairs, and meringue cookies are all made with eggs.

PREPARATION OF EGGS

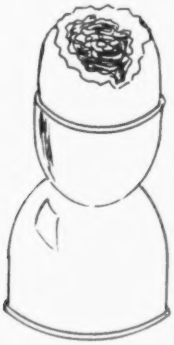
The high protein content of eggs dictates the principles of egg cookery. As with all protein, low to moderate temperatures and a short cooking time are necessary. High temperatures and overcooking cause the protein to toughen, curdle, and discolor.

Eggs may be prepared as a main dish, used as an ingredient, or used as a garnish. Eggs may be cooked in or out of the shell. Eggs cooked in the shell are correctly referred to as hard-cooked or soft-cooked rather than by the more popular terms hard-boiled and soft-boiled. Eggs cooked out of the shell may be baked, poached, fried, scrambled, or cooked as omelets, quiches, or souffles.

As an ingredient, eggs have a variety of uses. They may be used as a clarifyer, binder, emulsifier, thickener, coating, or leavener. Eggs are also important as garnishes. Hard-cooked eggs may decorate salads, appetizers, sandwiches, casseroles, and other dishes.

As A Main Dish

Eggs can be prepared in many ways to form main dishes. However, most can be grouped into one of six methods of preparation: cooking in the shell, frying, poaching, baking, scrambling, and omelets.



Cooking in the Shell. Eggs can be cooked in the shell in a kettle or steamer. To cook eggs in a kettle, place room temperature eggs in wire baskets and immerse them into boiling water. Simmer the eggs until they reach the desired degree of doneness. The ***simmering point*** is just below the boiling point. The cooking time determines the firmness of the egg. ***Soft-cooked eggs*** are cooked for less time than ***hard-cooked eggs***. Eggs can also be soft-cooked by covering them with cold water, bringing the water to a full rolling boil, then cooling the eggs under cold running water. Eggs can be hard-cooked in a steamer at 5-lb. pressure, then plunged at once into cold water.

Use of boiling water or overcooking causes the egg to develop a dark green ring around the yolk. This discoloration is due to interaction of the iron and the sulfur in the egg. High temperatures and overcooking also make the whites rubbery. Cooling eggs immediately after cooking helps to prevent discoloration. Cool the eggs under running water.

Peeled, hard-cooked eggs may be purchased. This is a convenience which the management may determine is cost effective. This avoids wasting eggs when the peels do not remove smoothly. Half, quarter, slice, dice, or sieve hard-cooked eggs as needed. Use in salads, sandwiches, sauces, or as garnishes. Hard-cooked eggs are used in a variety of dishes. For ***deviled eggs***, the yolks of halved hard-cooked eggs are mixed with seasoning and mayonnaise. For ***eggs a la goldenrod***, chopped egg whites are added to a cream sauce which is served over toast with sieved egg yolks on top.

Frying. ***Fried eggs*** are a popular breakfast food. The appearance of a fried egg depends on the quality of the raw egg. A high quality egg covers a small area. The white is thick and stands high. The yolk is firm and high.

Fried eggs are cooked in a small amount of fat over very low heat. Eggs may be fried on a griddle or in a frying pan. When eggs are fried on the griddle, rings may be used to contain each egg as it cooks. Eggs may also be fried in the oven. The length of cooking determines the degree of firmness.

Specific terms are used to describe the ways eggs are fried. In restaurants, customers specify their preferences when placing their orders. Eggs may be fried sunny-side-up, over-easy, hard-fried, or basted. ***Sunny-side-up*** or "eyes open" means the egg is cooked without turning; the yolk runs when broken and the white is firm. ***Over-easy*** means the egg is turned over while frying, the white is firm, and the yolk is soft. ***Hard-fried*** means the egg is cooked until both the white and yolk are firm, but not rubbery. ***Basted*** means the eggs are cooked in hot fat in a skillet or on the griddle and basted with fat without turning until the desired hardness is reached. The effect of basting may also be achieved by adding a teaspoon of water to the pan and covering the pan for a few seconds.

Eggs can also be fried in an oven. To oven-fry eggs, heat fat in pans or skillets. Carefully slide the eggs into the fat. Bake at 400°F for 5-7 minutes, or until the desired hardness is attained.

Poaching. ***Poached eggs*** are cooked in a small amount of water below the boiling point. For poaching, use Grade AA eggs. If lower grades are used, the egg white will spread too much. Adding a small amount of salt or vinegar to the water helps harden the whites before they spread in the water. The water must be below the boiling point or the egg will toughen. The length of cooking time will determine the degree of firmness of the poached egg. The eggs can be rinsed in hot water before serving to remove the vinegar.

Although eggs can be placed directly in the water for poaching, poaching eggs in small individual dishes is easier. Sauce dishes or a special poaching dish may be used. A ***poaching dish*** is a skillet fitted with a rack of small cups. One egg is placed in each sauce dish or cup. Water is heated to simmering in the skillet. A shallow pan of the same diameter may also be used. The containers of eggs are added. The skillet or pan is covered and the eggs are allowed to steam 5-7 minutes.

Eggs can also be poached in a steamer. Break the eggs into water in shallow counter pans. Steam at 5-lb. pressure for 3-5 minutes. Near the end of the cooking time, test the whites of poached eggs for doneness. Serve immediately.

Poached eggs may be served plain or used in other dishes. ***Eggs Benedict*** (BEN i DIKT) poached eggs are served on a toasted English muffin with a slice of Canadian bacon and topped with Hollandaise sauce. ***Western-style poached eggs*** are served with a spicy tomato sauce.

Eggs Florentine (FLOR uhn TEN) poached eggs are served on a nest of cooked spinach topped with cheese sauce.

Baking. ***Baked*** or ***shirred eggs*** are similar to both fried eggs and poached eggs. The egg is placed in a lightly greased cup, muffin tin, or ramekin (RAM a cun). A ***ramekin*** is a shallow ceramic baking dish with a handle. Salt, pepper, bread crumbs, milk, cream, or other ingredients may be added. The eggs are cooked in the oven at a moderate temperature (325°F) 15-20 minutes or to the desired degree of doneness. Doneness is tested by touching the egg lightly with the finger. Baking is a convenient,way to cook a large number of eggs at once.

For fluffy baked eggs, separate the whites and yolks. Beat the whites until fluffy. Pile the whites lightly on toast. A slice of ham or Canadian bacon may be placed on the toast before adding the egg white. Make a depression for the yolk. Place the yolk in the depression. Bake at 350°F about 10-12 minutes. The whites should be lightly browned and the yolk soft.

For variety, the baking dish can be lined with luncheon meat, ham, or cooked bacon. For ***eggs Mornay***, eggs are baked in cheese sauce and sprinkled with grated cheese. Eggs can also be baked in tomato cups topped with buttered crumbs.

Scrambled. ***Scrambled eggs*** are made of beaten eggs. Because the appearance of the egg before cooking is not important, eggs of a lower quality can be used.

A small amount of water, milk, or cream is added to the blended egg to ensure tenderness. Water makes the eggs tender. Milk or cream adds body and makes the eggs creamy and soft. A cream sauce is used when a large quantity of scrambled eggs are to be held on the steam table for a length of time.

Scrambled eggs are seasoned with salt and pepper. Chopped ham, bacon, parsley chives, mushrooms, or other ingredients may be added for additional flavor and texture.

The scrambled egg mixture can be made ahead of time. For mixing, a fork is often used for individual portions. For larger quantities, use a whip, eggbeater, or hand mixer. The mixture can be stored in a pitcher until needed. With experience, a short-order cook learns the amount of mixture to make each morning.

Eggs can be scrambled in a saute pan or on the griddle, a double boiler or bain-marie (BAN muh RE), in a brasier, or in a shallow baking pan in the oven. The eggs can be stirred with a turner, spatula, fork, or spoon. Scrambled eggs should be soft, yellow, and tender, but never watery. High heat and overcooking causes scrambled eggs to "weep" or become watery.

To cook eggs in a saute pan or on the griddle, cook the mixture in a small amount of melted fat. The heat should be low to moderate. Lift the eggs as they thicken. Allow the uncooked portion to flow under the thickened portion. This method produces tender, layered, solid eggs.

To scramble eggs in a double boiler or bain-marie, heat water to boiling in the bottom of the double boiler or bain-marie. Reduce the heat. Melt butter in the top of the double boiler. Pour the eggs in and cook, stirring occasionally, until thick. This method produces fine, soft particles, rather than large pieces.

To cook eggs for serving from a steam table, cook in a small amount of butter in a saute pan. Cook, stirring vigorously until hardened. For a large amount, cook one-third of the eggs at one time. Place the eggs in a container from the steam table. Stir in the cream sauce. Place the container in the steam table for serving. This method produces large, soft pieces of egg that stand up well on the steam table.

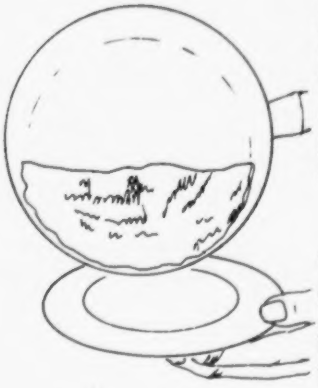
To cook scrambled eggs in the oven, first heat butter in the baking pan. Pour in the eggs and place in the oven. Cook, stirring occasionally, until thick and chunky. Eggs prepared by this method should be served immediately.

For variety, mushrooms, chopped cheese, curry powder, shredded dried beef, diced ham, or chopped bacon can be added to scrambled eggs. Scrambled eggs can also be served with a spicy tomato sauce.

Omelets. An ***omelet*** (OM let) is a mixture of eggs, salt, and pepper cooked in a saute pan. The mixture is like the one used for making scrambled eggs. However, omelets are not stirred during cooking. Omelets are made one at a time. Two to ten eggs are used for each omelet.

Omelets may be plain or fluffy. A ***plain omelet*** is called a classic or French omelet. It is cooked on top of the range. The ***fluffy omelet*** is started on top of the range and finished in the oven.

To make a plain or French omelet, melt a small amount of butter until it is foamy, but not brown. Pour in the eggs tilting the pan to spread the eggs over the bottom of the pan. Shake the pan vigorously while spreading the eggs evenly. Stir the eggs until they begin to set and then let them cook flat, like a large pancake. Raise the edges of the omelet to allow the uncooked egg mixture to reach the bottom of the pan. Fold or roll the omelet. Slip the folded omelet onto a warm plate and serve immediately.



To make a fluffy omelet, separate the yolks and whites. Beat the egg whites until stiff. Beat the egg yolks with salt and pepper until thick and lemon-colored. Fold the whites into the yolks, mixing thoroughly. Heat butter in a saute pan until it foams. Add the eggs. Brown the bottom side quickly. Place in the oven and bake about 15 minutes until the top is lightly browned. The mixture should feel dry and firm to the touch. Crease the omelet and fold it over on itself. Slip the folded omelet onto a warm plate and serve immediately.

Omelets may be filled or covered with a sauce. Many different foods can be used to fill an omelet. A filling of jelly, chopped meat, poultry, seafood, cheese, vegetables, or chopped herbs should be added just before folding the omelet. A creamy sauce or a spicy tomato sauce may be spooned over the omelet after it is placed on the serving plate.

Omelets may be garnished with parsley, chopped hard-cooked egg, pimento, asparagus spears, or a variety of other foods. The garnish should be suited to the meal and to the filling and sauce used.

As An Ingredient

In addition to their uses as main dishes, eggs are used as ingredients in a variety of recipes. Eggs may be used to clarify, bind, emulsify, thicken, coat, or leaven.

Clarifier. Egg whites and crushed egg shells may be added to stock, the basic ingredient of many soups, to clarify it. The word ***clarify*** means to clear. The egg will absorb small particles in the stock leaving the stock clear. The egg is removed by straining before the stock is used.

Binder. Egg is often used as a binder to hold other foods together. Eggs hold the ingredients in foods like meat loaf and salmon croquettes together. Since only a little egg is used, high temperatures may be used.

Emulsifier. An ***emulsifier*** (i MUL suh FIR) holds oil and another liquid together so that the oil is distributed evenly throughout the mixture. Without the emulsifier the oil and liquid would separate and the oil would rise to the top. When eggs are used as an emulsifier, the egg white forms a film around particles of oil keeping it suspended in the liquid. Mayonnaise is an example of a permanent emulsion in which eggs serve as the emulsifier. The eggs hold the oil and vinegar or lemon juice together.

Thickener. Eggs coagulate (ko AG yuh LAT) or thicken when cooked. This makes them good ***thickeners*** for foods such as puddings, custards, and sauces. A low temperature must be used or the product will ***curdle*** or develop a rough texture. Overcooking will also cause the product to curdle.

Coating. Foods to be fried may be dipped in eggs then coated with bread crumbs, flour, or cornmeal. The eggs cause the crumbs to stick to the food. Cutlets, fish fillets, and other foods are coated in this manner, then fried.

Leavening. When air is beaten into eggs, they act as a ***leavening*** agent. To ***leaven*** means to make a food light. When air is beaten into egg whites a foam is formed. The egg white surrounds the air bubbles in the foam. Egg white foams are used to leaven puffy omelets, souffles (lightly baked custard, with egg whites blended into the sauce just before baking, producing fluffiness. These must be served as soon as they are done or they will "fall.") meringues, angel cakes, and other foods. The air in the egg white foam expands when heated causing the product to increase in volume until the heat thickens the egg protein which surrounds the air bubble. This makes the product light and porous. Low temperatures are used to delay coagulation of the egg white and allow as much time as possible for the air to expand.

Several things can be done to ensure that as much air is beaten into the egg whites as possible. First, bring egg whites to room temperature before beating. Avoid exposing the egg whites to fat. Fat from the egg yolk, milk, or a greasy bowl or beater reduces the amount of air which can be beaten into the egg whites. Select the smallest suitable bowl, one with a small rounded bottom and sides that slope out to a wider top.

For the best leavening action, the egg white foam should be stable. The stability of the foam can be increased by adding cream of tarter, using thick whites, and adding sugar gradually after the whites are beaten to the soft-peak stage.

The type product determines the stiffness to which the egg white is beaten. The egg whites are suitable for folding into mixtures when the peak will just bend over when the beater is slowly lifted out of the foam. This ***soft-peak stage*** is also used for the soft meringues used on cream pies. Additional beating will cause the peak to stand up straight as the beater is lifted. Hard meringues are beaten to the ***stiff-peak stage***. Hard meringues may be shaped into meringue shells or cookies and baked at a low temperature (250°F).

Meringue (muh RANG) shells may be filled with ice cream or fruit. Further beating causes the foam to become dry and break into pieces or lumps. Overbeaten egg whites are not useful in food preparation.

Beaten egg yolks or whole eggs also help to leaven baked products that contain other leavening agents besides air. They also add moisture to form steam, adding to the leavening action. Eggs provide part of the leavening for butter cakes, muffins, and other quick breads.

As A Garnish

Hard-cooked eggs used as garnishes may be halved, quartered, sliced, chopped, or sieved. Deviled eggs can also be used as garnishes.

Hard-cooked eggs are popular garnishes for many foods. For canapes, sliced or chopped eggs may be used as garnishes. For salads, the eggs may be quartered, sliced, or chopped. Cream sauces may be garnished with sieved egg yolks.

STORAGE OF EGGS

The quality of eggs begins to decline as soon as they are laid. As eggs deteriorate in quality, the white becomes thinner, the yolk flattens, and the air space increases in size. Proper storage can slow this process. Fresh eggs should be kept under refrigeration until they are ready to be used. Eggs will retain their high quality for weeks at temperatures of 40-55°F. However, their quality will decline rapidly at room temperature. Eggs should be kept in the cartons in which they were delivered.

Most egg dishes should be served immediately. Hard-cooked, unpeeled eggs may be kept for several weeks in the refrigerator. Refrigerate cream, custard, or meringue pies, or foods with custard fillings, immediately after preparation. Refrigeration helps prevent the growth of salmonella bacteria.

Keep frozen eggs in the freezer. Frozen eggs will keep nine months to one year. Store opened containers of dried eggs tightly covered in the refrigerator. Use dried eggs as soon as possible.

Cheese

Cheese is a milk product made from the milk of cows, sheep, or goats. Most cheese is made from cow's milk. A starter made of sterilized milk and an enzyme called ***rennet*** (REN ut) causes the milk to separate into solids and liquid. The starter may also contain bacteria and/or molds which produce the special flavor of the cheese. Cheese is made from the milk solids or ***curds***. The liquid or ***whey*** is removed. The cheese is then ripened under carefully controlled conditions of temperature and humidity. It is ***ripened*** for a certain length of time to develop its flavor or ***sharpness***. Sharp cheese is aged cheese with a well-developed flavor. Some cheeses such as cottage cheese do not undergo any curing or ripening. They are called ***unripened*** cheeses and are consumed fresh soon after they are made.

SELECTION OF CHEESE

Cheeses must be selected for their intended use. Some cheeses are used mostly for appetizers, desserts, and salads. Such cheeses include blue, Brie, Camembert, Edam, Gorgonzola, Gouda, Liederkranz, Limburger, Roquefort, and Stilton. Some of these cheeses have very strong flavors that make them unsuitable for cooking. Others do not melt and blend in cooking.

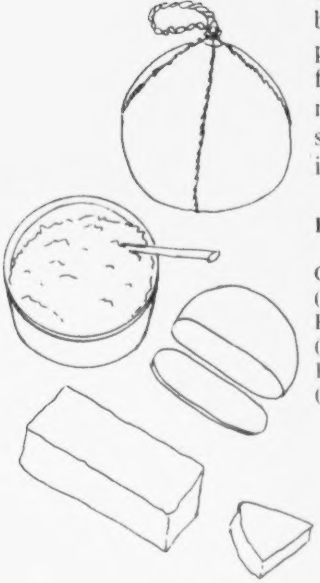
A good cheese for cooking should be meltable, blendable, and have a definite cheese flavor. When heated, the cheese should become soft and smooth. It should blend easily with other ingredients. The texture should be appropriate for the item being prepared. The flavor should be definite, but not strong enough to overpower the flavor of other ingredients.

In food service, processed cheese and processed cheese food are often preferred to natural cheese for cooking. These cheese products are cheaper than natural cheeses. They keep well and may be stored on the shelf until opened. They are very mild and easily melted. They do not become stringy or curdled.

Kinds of Cheeses

Cheeses may be classified as natural cheeses, process cheeses, and pasteurised process cheese food.

Natural Cheeses. ***Natural cheeses*** are made from milk combined with a starter. They may be classified according to their degree of hardness—hard, semihard, semisoft, and soft. ***Parmesan*** (PAR muh ZAN) is the hardest cheese. Grated Parmesan is used in cooking or sprinkled on foods like spaghetti. Blue cheeses are semihard and have characteristic blue veins formed by mold during the ripening process. They are popular in salads and salad dressings. Cheddar is a semihard cheese used for sauces, sandwiches, and salads. Mozzarella is the cheese used in making pizza and lasagna. Cream cheese is a soft cheese often used as a spread. Cottage cheese is a popular soft cheese used in salads, dips, and in cooking. Other natural cheeses are listed in the chart below.



Hard	**Blue Mold**	**Semihard**	**Semisoft**	**Soft**
Gorgonzola (GOR gon ZO la)	Blue, American	American	Bel Paese (BEL pa A ze)	Brie (bre)
Parmesan (PAR muh ZAN)	Blue, Danish	Cheddar	Brick	Camembert (KAM am bar)
Romano (ro MA no)	Roquefort, (ROK fert) French	Cheshire (CHESH ar)	Gouda (gou da)	Cottage
		Edam (E dam)	Mozzarella (MOT so REL lo)	Cream
		Emmenthaler (EM uhn tahl uhr)	Muenster (MUN star)	Liederkranz (le dar KRANTS)
		Gruyere (groo YAR)	Provolone (pro va LO ne)	Ricotta (ri KOT a)
		Swiss		Stilton (STIL tan)

Process Cheeses. ***Process cheeses*** are made from a combination of ground cheeses. An emulsifying agent is added to make the cheese melt and blend more easily. Process cheeses often have lactic acid, cream, salt, coloring, special seasonings, or smoke flavor added. The cheese is molded into shape. It has no rind and may be either hard or soft in texture. Process cheeses melt easily without curdling.

Some process cheese, called ***cold pack***, is of spreading consistency. Cold-pack cheese is a blend of fresh and aged natural cheese.

Pasteurised Process Cheese Food. ***Pasteurised process cheese food*** is made much the same way process cheese. One or more ground natural cheeses are mixed with nonfat dry milk solids and water. ***Stabilizers*** may be added to preserve the texture of the food. This product contains only about 10 percent butterfat, instead of the 36 percent required for cheese. Therefore, it is not actually a cheese.

Pasteurised process cheese food is mild, soft, and melts easily. It comes in bricks, rolls, slices, or links. It may be mixed with additional moisture to form a spread. Cheese spread may contain pimentos, fruits, vegetables, or meats. It may have a smoked flavor. Cheese spread is packaged in jars and loaves.

Imitation Cheeses. ***Imitation cheeses*** are also available. They are made from milk protein and vegetable oils. They are less expensive than natural cheese and have only about 10 percent of the cholesterol of other cheeses.

Forms of Cheese

Cheese is available in many varieties and forms. It comes packaged in many different containers. Cheese comes in cardboard containers, jars, plastic dishes, or individual wrapping.

The varieties of cheese include natural cheeses, process cheeses, pasteurised process cheese food, and pasteurised process cheese spread. Natural cheeses may be classified as hard, semihard, semisoft, or soft.

Cheese may be purchased in blocks, bricks, loaves, moons, halfmoons, rolls, links, or purchased sliced, grated, shredded, or cubed. It may be purchased in pressurized cans, as spreads and dips in many flavors, or as a ball rolled in nuts. Cheese spreads are packed in jars. Convenience forms of cheese usually cost more than the same weight of cheese in a solid piece.

Soft cheeses such as cottage cheese, ricotta, and cream cheese are highly perishable. They must be used before the date marked on the package. Cottage cheese comes in several varieties. It can be purchased as dry cottage cheese with no cream added or as creamed cottage cheese. It may also be purchased with added fruits, fresh garden vegetables, or chives.

Canned cheese soup or cheese sauces are available. Canned cheese soup may be used as a ready-made cheese sauce for au gratin vegetables, casseroles, meats, and pastas.

In addition to products which are primarily cheese, a variety of convenience foods containing cheese are available. Examples include macaroni and cheese mixes.

Grades of Cheese

The United States Department of Agriculture (USDA) has developed quality standards for cheddar and Swiss cheeses. The USDA inspection shield ensures that the product was produced under sanitary conditions and is of good quality. The USDA grades for cheese are based on flavor, texture, appearance, and color. U.S. Grade AA is the finest quality; U.S. Grade A is good quality. Cheese may be USDA inspected only, or inspected and graded. The grade may or may not be marked on packages of cheese.

MENU USES OF CHEESE

Cheese has a variety of menu uses. It can be served alone, combined with other foods, the chief ingredient in a dish, or grated and sprinkled on top of a dish.

Cheese is a favorite for sandwiches and appetizers. Popular cheese sandwiches include pimento cheese, grilled cheese, ham and cheese, and cheeseburgers. As appetizers, cheese may be served on canapes, in dips, or spread on raw vegetables or crackers.

Cheese can be combined with fruits and vegetables in salads. Cottage cheese is often used on low calorie salad plates to top a pineapple slice or peach half. Strips or cubes of cheese may be an ingredient in a tossed or garden salad. Grated cheese may be used as a topping on fruit or meat salads. Cheese is the ingredient which gives flavor to Roquefort or Blue cheese salad dressings. Hearty cheese salads are used as main dishes. Lighter cheese salads are used as accompaniments to the meat course.

Cheese may be used as a main dish. Popular cheese dishes include Welsh rarebit, cheese souffle, cheese fondue, lasagna, pizza, cheese omelet, quiche, and macaroni and cheese. In these dishes the cheese is the dominating flavor. Cheese can also be combined with other foods such as meat, potatoes and other vegetables, rice, macaroni, noodles, and spaghetti. Cheese is often used to replace meat and eggs because it is high in complete protein and in fat. It is often used as a low-cost replacement for meat.

Cheese may be used as a topping or in a sauce. Slices of cheese may be melted over grilled vegetables or hamburgers, or on top of individual casseroles. Bits of cheese can be added to cream sauces and soups. Cheese sauces are often added to vegetables. Foods cooked in a cheese sauce are listed as ***au gratin*** (O GRAH tin) on restaurant menus. Cheese sauces are also used with macaroni and other pastas in main dishes as macaroni and cheese and lasagna.

Cheese pies, cakes, and fancy frozen or gelatin desserts are popular endings for meals. Cheese pies and cakes are made from soft cheeses such as cottage or cream cheese. Fruit and cheese trays make a good dessert for a light meal. Cheese is also a favorite accompaniment for fruit pies.

As a garnish, cheese can be cut into a variety of shapes and used to decorate cold foods. It can also be grated and used as a garnish for soups, sauces, and hot dishes.

PREPARATION OF CHEESE

Cheese may or may not be cooked in food preparation. Cheese is used uncooked in a variety of cold foods. Sliced cheese is used as an ingredient in many cold sandwiches. Grated cheese is mixed with mayonnaise and other ingredients for sandwiches. Cottage cheese is often featured with fresh fruits as a salad. Sliced or grated cheese is used on canapes and appetizers. Cheese is used to fill celery sticks and fruits. Cheese is an ingredient in salad dressings.

For use, uncooked, cheese may be cut with a knife or cheese cutter into slices, strips, or chunks. Cutters can be used to cut a variety of shapes. Cheese can be grated coarsely or finely using a grater. If partially frozen, cheese may also be grated in a food processor. Soft cheeses, such as cream cheese, may be softened to room temperature and used as a spread or blended with other foods.

In cooking, cheese can be used as an ingredient or as a topping on a cooked dish. Cheese protein, like egg protein, coagulates when heated and becomes tough and rubbery when overcooked. Cheese should be cooked at a low temperature for a short time. When added to other ingredients, it should be cut into small pieces so that it will melt quickly and blend with other foods. Shred, grate, or slice cheese before adding it to other foods. Cut process cheese into cubes. High temperatures and overcooking cause cheese to become tough and stringy and may cause the fat to separate and drain from the cheese. Cheese dishes should be served hot immediately after cooking.

For best results, cook cheese in a double boiler over simmering water or bake it in an oven at low temperature (325° to 350°F.) When cooking cheese over direct heat, use a low temperature and stir constantly to prevent scorching. When cooking cheese or cheese dishes, it is best to heat the mixture just long enough to melt the cheese. When making cheese sauce, the cheese should be added after the white sauce is completely cooked and heated only enough to melt the cheese.

In some foods the cheese is protected from the heat of cooking. When cheese is used as a topping, a thin layer of buttered bread crumbs will protect it. In a pizza, which is cooked in a hot oven, the cheese may be covered with a sauce. In a grilled cheese sandwich, it is protected by the bread. In pastry and biscuits, it is protected by the dough during baking.

STORAGE OF CHEESE

Store cheese tightly covered or wrapped in the refrigerator. The flavors of strong cheeses can be absorbed by other foods. Cheese can readily absorb flavor from other foods. In addition, cheese dries out very quickly. The butterfat in natural cheese melts at room temperature giving the cheese a greasy look. If improperly stored or stored for too long a time, cheese may grow mold on its surface. Once this occurs, the flavor of the cheese may change making it unfit for use.

Soft cheeses spoil more quickly than hard and semihard cheeses. Soft, unripened cheese like cottage cheese and ricotta will spoil unless used in a few days. Use cream cheese within two weeks. Use these cheeses before the expiration date marked on the package. Other cheeses will last up to several months if properly cared for.

Cheese dishes, like egg dishes, cannot be stored and reheated successfully. They should be served immediately.

Points To Remember

- Eggs and cheese are important as main dishes, ingredients, and garnishes.
- An egg consists of a white (albumen) and a yellow portion (yolk) contained in a shell.

- Eggs are graded for freshness and size. USDA grades are Grade AA for the freshest egg followed by Grade A and Grade B. The six egg sizes are peewee, small, medium, large, extra large, and jumbo.

- Eggs may be purchased fresh, frozen, and dried. Whole eggs, whites, and yolks may be purchased in liquid, frozen, and dried forms.

- Eggs may be served at any meal of the day, and many popular foods are made with eggs.

- The principle of egg cookery is to use low to moderate heat and a short cooking time. High temperatures and overcooking cause the protein to toughen, curdle, and discolor.

- Eggs prepared as main dishes are usually grouped into six methods: cooking in the shell, frying, poaching, baking, scrambling, and omelets.

- Eggs cooked in the shell are correctly referred to as hard-cooked or soft-cooked rather than by the more popular terms hard-boiled and soft-boiled.

- Fried eggs are a popular breakfast food. Eggs may be fried sunny-side-up, over-easy, hard-fried, or basted.

- Poached eggs are cooked in a small amount of water below the boiling point. Poached eggs may be served plain or used in other dishes such as eggs Benedict, western-style poached eggs, or eggs Florentine.

- Baked or shirred eggs are similar to both fried and poached eggs. This method is a convenient way to cook a large number of eggs at once.

- Scrambled eggs are made of beaten eggs. For variety, mushrooms, chopped cheese, curry powder, shredded dried beef, diced ham, or chopped bacon can be added to scrambled eggs.

- An omelet is a mixture of eggs, salt, and pepper cooked in a saute pan. Omelets are made one at a time and may be plain or fluffy.

- In addition to their uses as main dishes, eggs are used as ingredients in a variety of recipes. Eggs may be used to clarify, bind, emulsify, thicken, coat, or leaven.

- Egg whites beaten to the soft-peak stage can be used for soft meringues on cream pies. Hard meringues are beaten to the stiff-peaked stage and can be shaped into meringue shells or cookies and baked at a low temperature.

- Hard-cooked eggs used as garnishes may be halved, quartered, sliced, chopped, or sieved. Deviled eggs can also be used as garnishes.

- Fresh eggs should be kept under refrigeration until ready to serve. Eggs should be kept in the carton in which they were delivered. Most egg dishes should be served immediately.
- Cheese is a milk product made from the milk of cows, sheep, or goats.
- Cheeses must be selected for their intended use. A good cheese for cooking should be meltable, blendable, and have a definite cheese flavor.
- Cheeses may be classified as natural cheeses, process cheeses, pasteurised process cheese food, and imitation cheeses.
- Cheese may be classified as hard, semihard, semisoft, or soft. It may be purchased in blocks, bricks, loaves, moons, half-moons, rolls, and links or sliced, grated, shredded, or cubed.
- The USDA has developed quality standards for cheddar and Swiss cheeses. The grades for cheeses are based on flavor, texture, appearance, and color. Cheese may be USDA inspected only or both inspected and graded.
- Cheese has a variety of menu uses. It can be served alone, combined with other foods, the chief ingredient in a dish, or grated and sprinkled on top of a dish.
- Cheese may or may not be cooked in food preparation. Cheese is used uncooked in a variety of cold foods. It may be cut with a knife or cheese cutter into slices, strips, chunks, or grated.
- Cheese used as an ingredient or as a topping on a cooked dish should be cooked at a low temperature for a short time.
- Store cheese tightly covered or wrapped in the refrigerator. Use soft cheeses before the expiration date on the package. Other cheeses will last up to several months with proper care.
- Cheese dishes, like egg dishes, cannot be stored and reheated successfully. They should be served immediately.

Words To Know

air cell
albumen
au gratin
baked or shirred eggs
basted
bloom
candling
chalaza
clarify
cold pack
curdle
curds
deviled eggs
natural cheeses
omelet
over-easy
Parmesan
pasteurized process cheese food
plain omelet
poached eggs
poaching dish
process cheeses
ramekin
rennet
ripened
scrambled eggs

dried eggs
eggs a la goldenrod
eggs Benedict
eggs Florentine
eggs Mornay
emulsifier
fluffy omelet
fortified eggs
freshness
frozen eggs
hard-cooked eggs
hard fried
imitation cheeses
leaven
leavening agent
sharpness
simmering point
soft-cooked eggs
soft-peak stage
souffle
stablizers
stiff-peak stage
sunny-side-up
thickeners
unripened
vacuum-packed
western-style poached eggs
whey
yolk

Questions For Review

1. Describe the parts of an egg.
2. Explain the process by which eggs are graded.
3. Name the sizes of eggs available.
4. Name two forms of eggs and discuss how to store each.
5. Beside each meal listed, name a type of egg dish served.
   a. breakfast
   b. lunch
   c. dinner
6. Name three ways eggs can be used in a meal.
7. Choose one of the following ways that eggs can be used as a main dish. Describe the cooking process and name at least one variation of the dish.
   a. cooked in the shell
   b. fried
   c. poached
   d. baked
   e. scrambled
   f. omelets
8. Name and describe three ways eggs are used as ingredients in various recipes.
9. Describe how eggs are used to garnish canapes, salads, or cream sauces.
10. Name at least one convenience egg product and describe the use and storage of it.
11. Name four different eggs dishes and one dish with egg used as an ingredient. Describe how each should be garnished.

12. Describe the proper storage procedures for fresh eggs, frozen eggs, and egg dishes.

13. If cheese is to be used in a cooked dish, what criteria should be kept in mind?

14. Name the four kinds of cheese available.

15. Name two of each of the following types of natural cheeses: hard, blue mold, semihard, semisoft, and soft.

16. Name and describe two forms in which cheese can be purchased.

17. Name a dish in which cheese is used as a(an):
    a. appetizer
    b. garnish
    c. main dish
    d. ingredient
    e. meat substitute
    f. topping

18. Describe how cheese is prepared when used in a cold dish.

19. Explain why cheese should be cooked at a low temperature for a short time.

20. Discuss how cheeses should be stored and how long they can be kept.

21

Chapter Twenty-one
Cereals and Pastas

COMPETENCY TO DEVELOP

- Prepare cereal and pasta products.

OBJECTIVES TO ACHIEVE

- Identify cereals and pastas.
- Outline criteria for selecting cereals and pastas.
- Describe convenience cereal and pasta products available.
- Describe menu uses of cereals and pastas.
- Describe methods for preparing cereals and pastas.
- Summarize procedures for holding and storing cereal and pasta products.

Cereals and pastas are made from grains. ***Grains*** are the edible seeds produced by certain plants of the grass family. The principle grains are wheat, rice, oats, barley, rye, corn, and buckwheat. These grains are also referred to as ***cereal grains*** or ***cereals***. Breakfast cereals, ***pastas*** (macaroni products), and flour are all made from cereal grains. Grains and grain products are inexpensive sources of supply of body energy. They are easy to store and keep well.

Selecting Cereals and Pastas

The seeds of all grains have the same basic structure. The three parts of the kernel are the bran, the endosperm, and the germ. The bran is the outside covering of the grain. It is made up of several layers. The bran supplies fiber and vitamins. The endosperm is the white, inner portion of the kernel. It is mostly carbohydrate but contains some protein. The germ is found at one end of the kernel. The germ is a rich source of vitamins, protein, and fat.

UNREFINED OR REFINED, ENRICHED OR FORTIFIED

Processed grains may be either unrefined or refined. The terms ***unrefined*** and ***whole-grain*** mean the same thing. In unrefined grain products, all three parts of the kernel are kept together. Whole-wheat flour and whole-grain cereals are examples of unrefined or whole-grain products. Whole-grain products have a distinctive flavor and have a coarser texture than those made from refined grains. Because of the higher fat content of the germ, whole grain products are more difficult to keep and sometimes develop an unpleasant flavor.

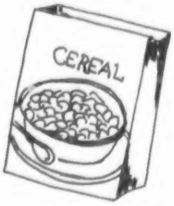
Refined grain products contain the endosperm of the grain. The bran or hull of the grain and the germ are removed. To offset the loss of vitamins and minerals in the refining process, many grain products are ***enriched*** or restored. This means that the lost nutrients are put back into the grain product. In white rice the nutrients may be preserved by a parboiling treatment which draws the vitamins into the endosperm where they are retained. The resulting white rice is known as ***converted*** rice.

When more nutrients are added to the grain product than were removed during processing, the product is said to be ***fortified***. More than 85 percent of all breakfast cereals are fortified.

WEIGHT OF PRODUCT

Cereal products are usually purchased by weight rather than by size of package. Often products in the same size container have different weights. This is especially true of breakfast cereals. Some are puffed and may take more space than a compact cereal.

VARIETIES AVAILABLE



Breakfast cereals are made from corn, oats, rice, wheat, or a combination of grains. Both hot and cold cereals are available. Oatmeal and cream-of-wheat are popular hot cereals. Cold cereals may be rolled, flaked, puffed, or shredded. They come in a variety of shapes, flavors, and colors. Many have added sugar or salt. They may have other ingredients such as raisins, nuts, coconut, or dried fruits added.

As well as being a breakfast cereal, rice is served whole, alone, or with other foods. Rice may be brown, polished or white, enriched, converted, coated, or wild. ***Brown rice*** has had only the hull removed during processing. It is available in regular and instant forms. ***Polished*** or ***white rice*** is polished until only the endosperm is left. ***Enriched rice*** has had the nutrients replaced that were removed by polishing. ***Converted rice*** has been treated to retain the nutrients present in the original grain. ***Coated rice*** has been treated with glucose and talc to make the rice look more polished and improve its keeping qualities. ***Wild rice*** is not actually rice, although it somewhat resembles rice. Wild rice is the seed of a wild grass. It is usually blended with long-grain rice.

The best pastas are made from ***durum wheat***. This wheat has a very high proportion of ***gluten*** (flour that has been washed to remove the starch). When mixed with water, the gluten becomes very elastic,

making it easy to stretch and cut into interesting shapes. A variety of pasta or macaroni products are available. Pastas include familiar ones like spaghetti, macaroni, lasagna, ravioli, and hundreds of others. Noodles are different from other pastas because they contain eggs. Pastas come in four main shapes:

- tubes–macaroni, manicotti (man-uh-COT-ee), and cannelloni (CAN-uh-LONE-knee)
- rods–spaghetti, spaghettini (spah-geh-TEE-knee), and vermicelli (VUR-muh-CHEL-e)
- ribbon-like strips–lasagna (la-SAHN-ya), noodles, and fettuccine (FET-uh-CHEE-knee)
- special or fancy shapes–shells, bows, and spirals.

CONVENIENCE GRAIN PRODUCTS

A variety of convenience grain products are available. Convenience breakfast cereals range from ready-to-eat breakfast cereals, to partially pre-cooked cereals, to instant cereals. ***Ready-to-eat*** cereals may be poured directly into the cereal bowl. ***Pre-cooked*** or quick-cooking cereals require only brief cooking. ***Instant*** cereals go directly into the cereal bowl, requiring only the addition of boiling water or milk. Convenience rice products include white or polished, precooked, and instant. Precooked rice and pastas are not popular in food service because they lose quality if kept warm for long periods.

Menu Uses of Cereals and Pastas

Grain products may be served at any meal. They make interesting and nutritious additions to any part of a meal–from soup to dessert.

Breakfast cereals are usually served at the morning meal. Some are generally served hot; others are served cold. In addition to their place on the breakfast menu, breakfast cereals may be used as toppings on casseroles, or may be rolled into crumbs and used for breading meats, poultry, and fish. They are used as ingredients in cookies, quick breads, and special desserts.

Rice is most often served as an accompaniment to meat, poultry, or fish, and is occasionally served hot as a breakfast cereal. It may be one of the main ingredients in baked dishes, and is frequently an ingredient in soups. Rice is also used in desserts.

Pastas or macaroni products can be used as a main dish like macaroni and cheese or chicken and noodles. Spaghetti or noodles can be used as an accompaniment instead of a potato. Pasta can also be used as an ingredient in a main dish, soup, or salad.

Cooking Cereals and Pastas

The cooking of cereals and pastas is similar. The principles of starch cookery apply to both. ***Starch*** is composed of microscopic granules which absorb liquid and swell when cooked. To prevent lumping of cereal granules, they must be added slowly to rapidly boiling water while stirring, or mixed with a small amount of cold water before they are stirred into boiling water. Whole cereal grains such as rice, and pastas such as macaroni, spaghetti, and noodles, are larger pieces than cereal granules. They are added directly to boiling water and stirred briefly to separate.

As the product cooks, three things happen: (1) the starch absorbs water; (2) the heat of cooking causes steam to form which erupts the starch granules; and (3) the released soluble starch paste causes the product to gelatinize. The term ***gelatinize*** refers to the thickening or soft gel which forms when starches are cooked. This is what makes cooked cereals thicken. It is what makes rice or macaroni products become tender and easy to chew without breaking apart.

Cereals and pasta may be boiled or steamed. Cereals and pastas in quantity are usually cooked in a steam-jacketed kettle or steamer. They may also be prepared in a heavy kettle on top of the range.

The amount of water needed for cooking varies with different cereal and pasta products. The amount of water required is usually two to two-and-one-half times that of the cereal product. Pretreated cereals may take less water, so it is best to follow the manufacturer's directions. About seven times as much water as pasta is necessary to give the pasta room to expand and cook without sticking to the pot. As a rule, granular cereals absorb more water than whole or flaked cereals. Do not use more water than the recipe calls for. When too much water is used, dissolved nutrients are discarded with the excess water. The practice of rinsing whole grain cereals and pastas such as rice and spaghetti may prevent sticking of the cooked product, but it also rinses away some of the water-soluble nutrients.

The amount of time required to cook cereals and pastas also varies. Fine-grained cereals like farina and cornmeal cook faster than coarser ones like oatmeal. Small or thin pieces of pasta cook faster than large thick ones. Some cereals have been pretreated to cook faster; be sure to check the manufacturer's directions. Smaller pieces cook faster because more of their surface is exposed to the heat and liquid. Cereals with little bran or cellulose cook faster than ones with large amounts. Whole-grain products require longer cooking time to soften the cellulose or fiber. Do not overcook cereals and pastas. Cereals and pastas become mushy, gummy, or thin if cooked too long. Cereals should be cooked until soft. For softer cereal, cook a few minutes longer. Pastas should be cooked until tender but firm, ***al dente***.

Excessive stirring during cooking causes the product to become sticky. Stirring breaks the grains or pieces of product. This increases the amount of starch in the cooking water.

Salt, for flavor, is added to the boiling water used to cook cereals and pastas. A little oil may be added to rice or pasta before cooking to keep it from sticking together as it cooks. Oil helps prevent rice from boiling over or foaming.

Another way to cook rice is to saute it in a small amount of butter, margarine, or oil before stirring it into a boiling liquid to finish cooking. Sauteeing keeps the rice from sticking together. It also adds flavor. Sometimes the rice is sauteed with onions, mushrooms, garlic, green pepper, or other foods for additional flavor. For example, the rice for Spanish rice is browned before the sauce is added.

Serving Cereals and Pastas

Cold cereals in food service establishments are usually served in prepackaged individual servings. The box of cereal is often served with a pitcher or carton of milk or cream, and sugar. Sometimes the cereal is placed in a bowl, milk or cream is added, and the cereal is topped with fresh fruit such as banana slices or strawberries. When cold cereal is prepared in this manner, it should be served immediately.

Hot breakfast cereals should be prepared as close to serving time as possible and kept covered until served. This prevents the cereal from drying. Hot cereals may be served with butter or cream and sugar.

Pasta dishes should be served hot. Spaghetti is usually placed on the serving dish, topped with sauce, then garnished. Other types of pasta are usually mixed with other foods as the dish is prepared. Appropriate garnishes for pasta dishes include Parmesan cheese, parsley, slices of sausage, grated or sliced cheese, or buttered crumbs.

Holding and Storing Cereals and Pastas

Cereals should be prepared just before serving, so lengthy holding or storage is not necessary. Pastas, to be served alone, as a side dish, or topped with a sauce, should also be cooked shortly before serving.

Food service establishments featuring spaghetti may use an automatic spaghetti cooker. The spaghetti is cooked in boiling water, drained in a basket, then rinsed in cold water to remove starch. The cooked spaghetti is portioned into individual servings using a rack of plastic cups. It is then stored in clean cold water in a storage tank until needed. Spaghetti may also be held in bulk in clean cold water or refrigerated. When needed, the spaghetti is reconstituted by lowering it into hot water for about thirty seconds.

Pasta dishes like lasagna should be refrigerated if they are not served immediately. They may be reheated in a microwave oven. Additional liquid may be needed for even heating without drying.

Points To Remember

- Cereals and pastas are made from grains, the edible seeds produced by certain plants of the grass family.
- The three parts of a kernel of grain are the bran, the endosperm, and the germ.
- Processed grains may be either unrefined or refined. In unrefined or whole-grain products, the three parts of the kernel are kept together. Refined grain products contain only the endosperm of the grain.
- Refined grain products may be enriched to restore nutrients lost in processing or fortified to add more nutrients than were removed during processing. Rice may be converted by treating it to retain the nutrients in the endosperm.
- Cereal products are usually purchased by weight.
- Breakfast cereals are made from a variety of grains, may be served hot or cold, and may contain other ingredients for added flavor and nutrition.
- Rice may be brown, polished or white, enriched, converted, coated, or wild.
- The best pastas are made from durum wheat. Pastas come in four main shapes—tubes, rods, ribbon-like strips, and special or fancy shapes.
- Convenience grain products include ready-to-eat, partially precooked, and instant breakfast cereals. Convenience rice products include white or polished, precooked, and instant.
- Grain products may be served at any meal or with any part of a meal.
- The principles of starch cookery require cooking the product in boiling water until the starch absorbs water. The heat of cooking causes steam to form, erupting the starch granules. The released starch paste gelatinizes. Fine granules should be mixed with a small amount of cold water first, or stirred slowly into the boiling water.
- The amount of water and the time required for cooking cereals and pastas varies. An excessive amount of water and overcooking should be avoided.
- Cereals and pastas should usually be served immediately after preparation. Appropriate accompaniments and garnishes should be provided.
- Special processes have been developed for holding and reconstituting spaghetti in food service establishments when spaghetti is the featured speciality.

Words To Know

al dente
brown rice
cereal grains
cereals
coated rice
converted
converted rice
durum wheat
enriched
enriched rice
fortified
gelatinize
gluten
grains
instant
pastas
polished rice
pre-cooked
ready-to-eat
refined
starch
unrefined
white rice
whole-grain
wild rice

Questions For Review

1. What are cereal grains?
2. What are the three parts of a kernel of grain?
3. How are refined and unrefined grain products different?
4. What is the difference between enrichment and fortification of grain products?
5. Are cereal products usually purchased by weight or size? Why?
6. What are some variations in breakfast cereals?
7. What types of rice are available and how do they differ?
8. What are the four main shapes of pasta?
9. What are some convenience grain products?
10. What are some menu uses of grain products?
11. What are the principles of starch cookery?
12. What three things occur as starches cook?
13. Why should you use only the amount of water called for when cooking grain products?
14. What does *al dente* mean? To what products does use of this term apply?
15. How should each of the following be served?
    a. cold cereals
    b. hot breakfast cereals
    c. pasta dishes
16. How can spaghetti be held if it is not served immediately?

22

Chapter Twenty-two

Vegetables and Fruits

COMPETENCY TO DEVELOP

- Prepare fruits and vegetables.

OBJECTIVES TO ACHIEVE

- Summarize considerations in selecting vegetables and fruits.
- Identify menu uses of vegetables and fruits.
- Describe preparation needed for vegetables and fruits.
- Summarize procedures for cooking vegetables and fruits.
- Outline procedures for serving and garnishing vegetables and fruits.
- Cite guidelines for holding and storing vegetables and fruits.

A variety of vegetables and fruits are served in food service establishments. Modern methods of processing, transportation, and storage make vegetables and fruits available in fresh, frozen, canned, dried, and dehydrated forms all year.

Selecting Vegetables and Fruits

Vegetables include the fruits of plants such as tomatoes, peppers, cucumbers, and squash: the parts of plants used as food.

KINDS OF VEGETABLES

Vegetables are classified in several ways: part of plant, color, flavor, and moisture content. The following chart illustrates these classifications and gives examples of vegetables in each.

CHARACTERISTICS	EXAMPLES
Part of Plant	
Root or Tuber	Beets, carrots, parsnip, potatoes, radishes rutabagas, turnips
Bulb	Garlic, leeks, onions, scallions
Stem	Asparagus, celery, mushrooms, rhubarb
Leaf	Brussels sprouts, cabbage, chard, kale, lettuce, parsley, spinach, watercress
Flower	Broccoli, Brussels sprouts, cauliflower
Pod/Seed	Beans, corn, peas, rice, soybean
Fruit	Cucumber, eggplant, okra, pepper, squash, tomato
Color	
White	Cauliflower, potato, mushroom, parsnips, white onion, white turnip
Yellow	Carrots, corn, pumpkin, some squash, sweet potato, rutabagas
Green	Asparagus, broccoli, Brussels sprouts, cabbage, escarole, green peppers, leaf vegetables, peas, spinach
Red	Beets, radishes, red cabbage, red onion, red peppers, tomatoes
Flavor	
Strong-flavored	Broccoli, Brussels sprouts, cabbage, cauliflower, onions, parsnips, rutabagas, turnips
Mild-flavored	Asparagus, beans, beets, carrots, corn, lettuce, mushrooms, peas, potatoes, spinach, squash
Moisture Content	
High	Asparagus, beets, broccoli, Brussels sprouts, cabbage, carrots, cauliflower, corn, eggplant, green beans, green peas, lettuce, mushrooms, onions, peppers, pumpkins, radishes, rutabagas, spinach, summer squash, Swiss chard, tomatoes, turnips, zucchini

CHARACTERISTICS	EXAMPLES
Moisture Content	
Low	Lima beans, okra, parsnips, potatoes, acorn squash, yams
Dry	Dried beans, dried peas, freeze-dried vegetables, lentils

KINDS OF FRUITS

Fruits are classified by their shape, structure, and other characteristics. ***Pomes*** are fruits with a smooth skin which covers a thick fleshy area surrounding a ***core*** containing seeds. ***Drupes*** are fruits which contain a large single seed or ***pit***, surrounded by juicy flesh. ***Berries*** are small, juicy fragile fruits with seeds embedded in the flesh. Citrus fruits have juicy flesh which is divided into sections by membranes. They usually have a thick skin and a tart flavor. ***Melons*** have a tough skin surrounding a thick flesh. Seeds are located in the center of the melon. ***Tropical fruits*** include a variety of fruits which grow only in very warm areas. The following chart gives examples of fruits with each characteristic:

CHARACTERISTICS	EXAMPLES
Pomes (with cores)	Apples, crabapples, pears, quince
Drupes (with pits)	Apricots, cherries, nectarines, peaches, plums
Berries	Blackberries, blueberries, cranberries, grapes, raspberries, strawberries
Citrus fruits	Citrons, grapefruits, kumquats, lemons, limes, oranges, tangerines, tangelos
Melons	Cantaloupes, Casaba melons, honeydews, muskmelons, Persian melons, watermelons
Tropical fruits	Avocados, bananas, dates, figs, kiwi fruits, mangos, papayas, persimmons, plantains, pomegranates, pineapples

FORMS OF VEGETABLES AND FRUITS

Vegetables and fruits are available fresh, frozen, canned, or dried. A food service establishment may use any of these forms and may purchase some vegetables and fruits in more than one form.

Fresh

Some fresh vegetables and fruits are available at any time during the year. Others are available only at certain times or seasons. Refrigeration and transportation make many fruits available when they are not in season locally. However, they are often more expensive.

Fresh vegetables and fruits should be at the peak of quality and ready to use. They should look fresh, firm, and bright in color. Their shape should be uniform. They should be neither ***underripe*** (too hard) nor ***overripe*** (too soft). They should also be free of bruises and soft spots. They should show no signs of rot or decay.

Fresh vegetables and fruits are usually purchased in cartons, lugs, or flats. A ***carton*** is a large, heavy cardboard box in which the vegetables or fruits are placed either wrapped or unwrapped. The number of pieces per carton may be indicated. A ***lug*** is a shallow cardboard or wooden box used for packing easily bruised vegetables and fruits such as tomatoes and peaches. A lug holds about 30 lbs. loosely packed. Vegetables and fruits packed in lugs may be numbered by size. The size of the fruit gives an indication of the number of pieces in the lug. For example, a lug of tomatoes marked 5/5 will have five tomatoes across and lengthwise or 25 tomatoes in a layer. A lug is packed in two layers, so there would be 50 tomatoes in a lug. A ***flat*** is a carton which holds twelve baskets. Cherry tomatoes or berries are usually packed in flats. Each basket holds about 1 lb. Some vegetables and fruits, like potatoes, onions, and cooking apples are packed in sacks. Vegetables purchased in small amounts like parsley and watercress are packed in bunches. Some solid fruits such as oranges and grapefruits are packed in a crate. A ***crate*** is a large, oblong box separated into two sections.

Fresh vegetables and fruits are graded by number. Number one is the best grade. However, the grade only indicates the quality at the time of grading. Produce which has not been properly stored and handled may be a lower grade than indicated.

Many fresh vegetables and fruits spoil quickly and must be used shortly after purchase. Some must be kept under refrigeration. Others may be stored in a dry storage area. See Chapter 12 for additional information on storing fresh fruits and vegetables.

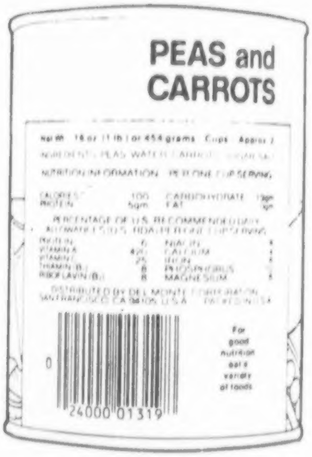
Frozen

Frozen vegetables and fruits are available cut, sliced, diced, or whole. They may be frozen alone or combined with a sauce. Two or more vegetables or fruits may be combined.

Frozen vegetables and fruits are made from Grade A fresh produce. Vegetables for freezing are picked when young and slightly ripe. The vegetables are blanched, and quick-frozen immediately. ***Blanching*** means that steam is applied to seal the outside of the vegetable and shorten the cooking time. The vegetables are then frozen sealing the enzymes that cause development of poor color, texture, and flavor during storage. Blanching also wilts and softens vegetables making them easier to package. Frozen potatoes for deep-fat frying are especially popular in food service. Fruits and berries are frozen when young and fully ripe. They are quick-frozen at the peak of flavor and color. Fruits may be frozen with or without sugar sweetening. Frozen concentrated fruit juices provide fresh-tasting juice. Because of prepreparation, frozen vegetables and fruits save preparation time in the food service establishment.

Frozen vegetables and fruits are packaged in sealed 2 1/2 or 5 lb. cartons. The cartons are sealed to prevent freezer burn and dehydration. Freezer burn occurs when the seal is inadequate. The food becomes dehydrated in spots where moisture is lost. Frozen vegetables and fruits should be kept at a temperature of 0°F until ready for use.

Canned


PEAS and
CARROTS
For good nutrition eat a variety of foods
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Canned vegetables and fruits are available in a variety of styles. The vegetables or fruits may be whole, cut up, diced, or sliced. Vegetables are usually packed in lightly salted water. Fruits are often packed in a sugar syrup. The information on the label provides information about both the style and quality of the vegetables or fruits. Canned vegetables and fruits are even easier to prepare than fresh or frozen ones. However, their color and flavor are not as natural.

Vegetables and fruits, canned according to United States Government standards, may have a grade on the label. The grade may be listed as a letter or descriptive word. The grade purchased usually depends on the intended use, with the lower grades being used in mixed-food combinations such as soups. The following grades are used:

- ***U.S. Grade A Fancy***. This grade indicates that the product is of excellent quality. It has the best color and flavor. The pieces are perfect and uniformly sized.

- ***U.S. Grade B Choice***. Another term for this grade is Extra Standard. This grade is for a product of good flavor and color. The pieces may have some imperfections. The size of the pieces may vary.

- ***U.S. Grade C Standard***. This grade indicates a product of poor color and flavor. The pieces are imperfect and vary in size.

Canned vegetables and fruits should be stored in a dry storeroom. Changes in color, texture, and taste occur when canned goods are stored at room temperature or above. If long-term storage is necessary, a cool storage area 45-60°F is needed.

Avoid using any canned vegetable or fruit which shows signs of spoilage. Canned foods may be spoiled if the can bulges at the sides or top, if the contents are mushy, if the liquid spurts from the can during opening, or if the contents smell sour. NEVER TASTE CANNED FOODS WHICH MAY BE SPOILED. They may contain a deadly form of food poisoning called botulism.

Dried or Dehydrated

Most ***dried*** vegetables are legumes. ***Legumes*** include lentils, soybeans, peas, and beans. Dried beans and peas are graded U.S. #1, #2, and #3. The best quality products, those graded U.S. #1, are free of foreign objects such as sticks, stones, and dirt. They have no broken pieces, split or damaged seeds. Dried legumes should be free of weevil damage which is indicated by small holes in the seeds.

Dehydrated vegetables and fruits are fresh vegetables from which most of the water has been evaporated. Dehydrated vegetables include potato products, onions, green peppers, and mushrooms. Dehydrated fruits include raisins, prunes, peaches, apricots, and apples. They are graded the same as fresh fruits. Dehydrated products save labor costs and are often acceptable substitutes for fresh produce.

Dried and freeze-dried fruits and vegetables should be stored in tightly sealed containers in a cool, dry place. Observing these storage procedures helps to prevent infestation by insects, fermentation, or growth of molds.

Menu Uses of Vegetables and Fruits

Vegetables and fruits add color, texture, flavor, size, and shape as well as nutrients to a meal. They can be served at any meal during the day. They can be served at any part of the meal.

Vegetables are most often served as an accompaniment to a main dish. Sometimes they are served as a main dish. Vegetables are used in soups, salads, snacks, and even desserts. Vegetable juices are often served as appetizers as are a variety of fresh and cooked vegetables. Vegetables are also attractive garnishes for other foods.

Fruits are most popular served fresh. Fresh fruits are used as appetizers, as snacks, in salads, and as desserts. Fruits are often served as accompaniments to other foods. For example, cranberries are usually served with turkey and apples with pork roast. Fruits are used as ingredients in soups, breads, sauces, beverages, and desserts. They make attractive garnishes for a variety of other foods.

Preparation of Vegetables and Fruits

Both fruits and vegetables need preparation before use. Thorough washing removes any dirt or remaining insecticide spray. Unusable tops or outer leaves are discarded. Scraping or paring may be needed to remove the skin or peel. In many vegetables and fruits, vitamins and minerals are concentrated just under the skin. Pare thinly so the nutrient loss will not be great. Leafy and stemmed vegetables are usually crisped before using. To crisp leafy and stemmed vegetables, wash them thoroughly in cold water and pat them dry with a cloth or paper towel.

Wrap the clean, dry vegetables in a clean towel and place them in the refrigerator crisper to chill. Or put the wrapped greens in a plastic bag and store on a refrigerator shelf.

Vegetables and fruits may be cut into a variety of shapes depending on their intended use. They may be diced, minced, shredded, or sliced. Some are left whole. ***Dicing*** means cutting into cubes. ***Mincing*** means chopping very fine. ***Shredding*** means cutting into thin strips. Thin strips are called Julienne, a term used in French cooking. ***Slicing*** refers to cutting across or at an angle. Refer to Chapter 9 for Information on using knives.

Cut fruits with low acid content, such as bananas, apples, and pears, turn dark when exposed to air. To prevent this discoloration, sprinkle the cut surface with an acid fruit juice such as lemon or lime.

Cooking Vegetables and Fruits

The goal when cooking vegetables and fruits is to retain the maximum amount of their original food value, color, flavor, and texture. This goal applies to all forms of vegetables and fruits—fresh, frozen, canned, dried, and dehydrated. Observing a few basic principles will ensure that these qualities are retained.

COOKING PRINCIPLES

Cooking softens the cellulose (CELL yah lows), or structure, of vegetables and fruits making them less crisp. The starch in the vegetable or fruit absorbs water, swells, and becomes more soluble. Changes in color and flavor occur, and nutrients dissolve in the cooking liquid. To retain their best qualities, *cook fresh vegetables and fruits in as little water as possible, for as short a time as possible.*

Cooking in little or no water reduces the loss of B vitamins, vitamin C, and minerals which dissolve in water. Covering the pan helps prevent scorching and evaporation of the cooking liquid. Strong-flavored vegetables like cabbage may be cooked in enough water to cover the vegetable to make their flavor milder. However, more water-soluble nutrients will be lost. The cooking water should be saved for use in soups, sauces, and gravies.

Overcooking causes loss of nutrients, color, and flavor, and results in a mushy texture. Overcooking causes loss of nutrients which are destroyed by heat. For this reason, vegetables and fruits should be cooked only until they are just tender. Overcooking causes the color of vegetables and fruits to become drab. It can cause strong-flavored vegetables to develop an unpleasant flavor. Overcooked vegetables and fruits lose their texture and shape and become mushy.

The color of some vegetables and fruits is affected by exposure to air, acid, or heat. White vegetables like potatoes, cauliflower, and turnips discolor when cut areas are exposed to air. Cook potatoes in a covered pan in just enough salty water to cover the vegetables. Cook strong-flavored white vegetables uncovered until just tender. Red vegetables like beets and red cabbage contain a substance that turns blue when cooked in water. Cook red vegetables in a small amount of water with an acid like vinegar or lemon juice added to brighten and deepen the red color. Because tomatoes are naturally acid, they do not lose their color in cooking. Green vegetables become dull when exposed to acid or when they are overcooked. Green vegetables naturally contain some acid which can dull their color during cooking. The acid will dissipate in the steam if the vegetable is cooked uncovered. For this reason, cook green vegetables uncovered in a small amount of water until just tender. Never add baking soda to preserve the green color since it will destroy vitamins.

Vegetables and fruits should be served as soon as possible after cooking. For this reason, they should be cooked in small quantities as close to serving time as possible. Lengthy holding of warm vegetables and fruits causes color loss and mushy texture.

The effects of moist heat on the cellulose of fruit is reduced by sugar. When fruits are cooked in moist heat, the fruit breaks apart. When fruit is cooked in sugar or sugar syrup, it will retain its shape. The sugar strengthens the cellulose structure and keeps the fruit from falling apart. The decision to add sugar before or after cooking fruit should be based on the desired texture of the cooked fruit product.

COOKING METHODS

Fresh and frozen vegetables and fruits may be boiled, steamed, baked, sauteed, fried, or broiled. They may also be cooked in a microwave oven.

Fresh fruits are rarely cooked on top of the range in food service. They are sometimes baked.

Canned vegetables and fruits are completely cooked in the canning process. They may be reheated in their own liquid or used as ingredients.

Dried and dehydrated vegetables and fruits must be rehydrated or reconstituted with water. Dried vegetables such as whole beans and peas are soaked in water, then boiled. Lentils and split peas do not need to be soaked before cooking. Dehydrated vegetables may be reconstituted with water before cooking or added to dishes high in liquid such as soups. Dried and dehydrated vegetables can be boiled, simmered in water, or baked.

Fresh vegetables may be blanched, or slightly precooked, before cooking. Blanching enhances the color of green vegetables. It makes strong-flavored vegetables taste milder. Vegetables are blanched by placing them in enough boiling water to cover, returning the water to a boil, draining, then cooking.

BOILING

Boiling is the most popular method for cooking fresh vegetables. Boiling can be used for fresh, frozen, canned, dried, or dehydrated vegetables and fruits. To boil vegetables or fruits, follow these directions:

1. *Bring salted water or liquid to a boil before adding fresh, frozen, or canned vegetables or fruits.* Spinach and other fresh leafy vegetables and juicy fruits such as berries and rhubarb need no added water. Most vegetables and fruits need only enough water to cook. Older root vegetables that need longer to cook require more water than young, tender vegetables. Strong-flavored vegetables may be covered with water. Frozen vegetables require less water than fresh vegetables. They have already been blanched and require less cooking time. Also, the ice crystals in the product provide some of the water. Canned vegetables should be reheated in their own juices. Canned vegetables are usually seasoned with salt already. Drain the juices into a sauce pan and boil until the volume is reduced by one half. This concentrates the flavor and nutrients. Dried vegetables are soaked in about two gallons of water per pound, then cooked in the same water. Dried fruits are soaked in cold unsalted water for several hours.

2. *Bring the water or liquid quickly back to the boiling point.* Cover yellow and red vegetables. Do not cover white and green vegetables. Do not boil dried fruits, since boiling will toughen the fruit and cause it to become mushy.

3. *Start timing when the water returns to the boiling point. Cook until just tender.* Refer to a timetable for the cooking time required for boiling fresh or frozen vegetables. Heat canned vegetables only long enough to bring to serving temperature. Cook dried vegetables and fruits slowly until tender. Add more water, if needed. Follow package directions for cooking dehydrated and freeze-dried products.

4. *Drain cooked vegetables or fruits and place in serving pans. Add seasonings.* Save the cooking water to use in soups and sauces, or serve it with the vegetable or fruit. Melted butter or margarine is added to most boiled vegetables. Spices and herbs may be added for additional flavor. Many vegetables are served with a cream sauce. Dried fruits are naturally sweet and require very little sugar. If more sweetness is desired, add the sugar after the fruit is cooked.

Sometimes boiled (or steamed) vegetables are served mashed or whipped. Mashed potatoes are especially popular. To make mashed potatoes, drain boiled potatoes and place in a mixer. Break up the pieces with a paddle. Then whip on low speed until free of lumps. Add butter, salt, and pepper and mix thoroughly. Add cream or hot milk until desired consistency is reached. Whip on high speed until light and fluffy.

Canned rather than fresh fruits are usually used in food service when cooked fruits are needed. When fresh fruits are cooked in water, they lose their shape, and with enough cooking fall apart. This is desirable when making fruit sauces such as cranberry sauce.

When fruits are cooked with sugar, they will retain their shape. When preparing cinnamon apple rings or stewed apples or peaches, the fruit is cooked with sugar or in a sugar syrup. The desired texture determines whether sugar is added before or after cooking fruit.

STEAMING

Steaming is an excellent method for cooking vegetables. It is fast, retains nutrients, and preserves the color of the vegetables. Fresh and frozen vegetable can be cooked in a steam-jacketed kettle. Canned vegetables can be heated in a steam-jacketed kettle. Fresh and frozen vegetables can also be cooked in a pressure steamer or by free steam.

Steam-Jacketed Kettle

Cooking vegetables in quantity in a steam-jacketed kettle is faster than boiling. The steam circulates around the pot of vegetables without touching them. To cook in a steam-jacketed kettle, bring water to a full boil in the kettle. Add the vegetables and return to a boil. Reduce the heat and cook until tender. Do not cover white or green vegetables. Remove the vegetables from the kettle as soon as they are done. Season and serve.

Pressure Steamer

A pressure steamer is used for cooking most vegetables in food service. However, it is usually not used for delicate, quick-cooking vegetables like spinach. To use a pressure steamer, place the vegetables in steamer pans or baskets. Add a small amount of water if solid pans are used. No water is needed if perforated baskets are used. Place the steamer pans or baskets in the steamer and lock it. Turn on the steamer. Set the pressure according to manufacturer's directions for the required ***pounds per square inch (psi)***. As the pressure increases, so does the temperature. Begin timing when the steamer reads the proper cooking temperature. Set the timer according to the manufacturer's directions. The timing must be exact. Only a few seconds of overcooking will cause colorless, mushy vegetables. Cooking for a short time at high temperature results in naturally colored vegetables. Never attempt to open the steamer until the pressure reaches zero. Add seasonings and serve vegetables immediately.

Free Steamer

Vegetables may be cooked by ***free steam*** (steam which is not under pressure). In a ***free steamer***, a perforated pan fits into a brazier. The steam circulates around the food in the pan, slowly cooking it. Cooking vegetables by free steam requires as much or more time than boiling and much more time than cooking by steam under pressure. Green vegetables lose their color if overcooked under free steam.

BAKING

Vegetables and fruits may be baked whole or in pieces. Baking in their skins is a popular method for cooking solid, low-moisture vegetables like potatoes and winter squash. Potatoes and yams are usually baked whole.

Baking time can be cut in half by inserting a stainless steel skewer into the potato. To save time potatoes are frequently steamed in their skins until almost done. Then they are wrapped in foil and baked in the oven until soft.

Potatoes are available already baked and stuffed. Only reheating is needed, but the quality may be lower than that of freshly baked potatoes. To make stuffed potatoes, remove the insides from halved baked potatoes. Prepare the insides as for mashed potatoes. Refill the potato shells. Sprinkle with paprika and parmesan cheese. Spread with butter. Reheat in a hot oven for 10 to 15 minutes until brown.

Fresh fruits are sometimes baked. Some fruits are baked whole. Apples should be cored before baking, and the upper quarter may be peeled. Pears are peeled but not covered. The core of baked apples may be stuffed with brown sugar and cinnamon. Apples and pears may be baked in a honey or sugar syrup. For pears, the syrup may be mint-flavored and colored green. Apples may be glazed with sugar syrup, colored, and flavored with red cinnamon candies.

Canned, dried, frozen, or fresh fruits can be combined with other ingredients to make rich baked desserts. Cobblers, crisp bettys, and turnovers are examples of baked fruit desserts. Date, orange, cranberry, blueberry, and banana quick breads are popular. These special breads may use canned, frozen, fresh, mashed, or candied fruits. Fruit pies can be made from fresh, canned, frozen, or dried fruits.

Other vegetables and fruits are cut in pieces and baked in casseroles. ***Scalloped*** vegetables and fruits are baked with a sauce or other liquid. Potatoes and apples are popular scalloped. Au gratin vegetables are sprinkled with buttered bread crumbs or grated cheese and baked until brown. Scalloped and au gratin vegetables are also available in dehydrated form.

SAUTEEING

Some vegetables and fruits are ***sauteed*** or cooked in a small amount of butter, margarine, or oil. In Chinese cooking, this technique is called ***stir-frying***. In stir-frying, vegetables are cooked quickly until just done and seasoned with soy sauce.

Sauteed potatoes are a popular menu item. Potato slices are usually called American-fried ***cottage potatoes***, or home-fries. Sauteed or diced potatoes are called hash browns.

Sauteeing may be used as a preliminary step in preparation. Onions, mushrooms, and green peppers are often sauteed before being added to other foods. Cooked vegetables such as green beans may be sauteed in butter to add flavor.

DEEP-FAT FRYING

Some vegetables are fried in deep fat. French fried or deep-fried potatoes are especially popular in fast food restaurants. They are frequently served with steaks.

Most food service establishments use ready-to-fry potatoes to save time and energy. Frozen potatoes may be cut in long strips for regular fries, thin strips for "***shoestring***" fries, or thick pieces for "***thick-steak***" fries. They may be straight-cut, crinkle-cut, or wedge-cut. ***Potato rounds*** are shredded potatoes formed into bite-sized pieces. Frozen potatoes should be kept in the freezer until ready for use.

Fresh potatoes prepared for frying may be cut into iced water to keep them crisp and to prevent discoloration. However, they should not be soaked. Soaking prolongs cooking time and results in soggy, oily fries. Dry potatoes before cooking. Fresh potatoes may be blanched first by frying until tender, but not browned. Blanched potatoes may be refrigerated up to two days before use. Blanched potatoes should be heated to room temperature before browning. Blanched or unblanched potatoes should be fried in hot fat (375-380°F) in baskets no more than half full. Blanched potatoes cook much faster than unblanched ones.

When deep-fat frying potatoes in any form, shake the basket to drain excess fat. Salt the potatoes just before serving. Apply the salt away from the grease in the fryer. Deep-fried potatoes can be held briefly under an infrared holding lamp. Lengthy holding results in soggy potatoes.

Other vegetables like onions, eggplant, cauliflower, broccoli, and squash may be dipped in batter and fried in deep fat. Batter mixed with pieces of vegetables or fruit and fried in deep fat is called ***fritters***. Corn fritters and apple fritters are among the best known.

BROILING

Tomatoes are the most popular broiled vegetable. Thickly sliced or halved tomatoes may be topped with buttered crumbs and broiled until brown. Some scalloped vegetables may be broiled for a short time to brown the tops. Broiled grapefruit halves may be served as desserts. The seeds are removed and the section loosened. The halves are spread with honey or brown sugar. The grapefruit halves are broiled lightly until browned and served immediately.

MICROWAVING

When only a small quantity of cooked vegetables is needed, microwaving is quick and easy. Microwaving preserves the color, texture, and nutrients of the vegetable. To cook vegetables in the microwave oven, cut the vegetables evenly in small pieces and place in a ceramic dish. Add two tablespoons of water to fresh vegetables, none to frozen vegetables. Cover the vegetables and cook on high power. Stir after half the cooking time. Microwaving can also be used for reheating vegetables.

Serving and Garnishing Vegetables and Fruits

Vegetables should be served immediately after cooking. Many are naturally colorful and require no additional garnish. When a garnish is desired, spices and herbs may be used to add flavor and color. Vegetables can be combined to make them more colorful. Some popular combinations include green beans and mushrooms, carrots and celery, cauliflower and raw peas, raw potatoes and beans, peas and pearl onions, and creole tomatoes. Sauces add flavor, color, and texture. Almonds, mushrooms, sour cream, pearl onions, and buttered bread crumbs are appropriate garnishes for many vegetables.

Fruits may be garnished with whipped cream, ice cream, a dessert sauce, or a sprinkling of chopped nuts or shaved chocolate. A sprig of fresh mint adds appeal to many fruits. Fruits of a contrasting color are also appropriate garnishes. Maraschino cherries, strawberries, and mandarin orange slices are especially popular. Cake or cookie crumbs may be used to garnish cooked or canned fruits.

Holding and Storing Vegetables and Fruits

Fresh vegetables used as appetizers or garnishes or in salads may be prepared in advance and stored in the refrigerator. Prepared salads should be kept on ice until served. Cooked vegetables should be prepared in small quantities and served immediately. Leftover vegetables should be refrigerated and used in soups or casseroles. Leftover vegetable juices and cooking liquid should be used as the liquid in soups and sauces.

Fresh fruits which darken after cutting should be treated with ascorbic acid or lemon juice to keep them bright. Fresh fruits should be kept cold until served. Frozen fruits should be thawed, unopened, in the refrigerator and used quickly, or they will spoil. Use frozen juices within 2 to 3 days after opening and preparing. Leftover fresh or frozen fruits should be discarded. Leftover cooked fruits should be refrigerated. Canned fruits and juices may be served at room temperature or chilled first. Canned fruits and juices become perishable after opening. Store any unused portions in airtight containers in the refrigerator and use up in 2 to 3 days. Dried fruits keep for about 6 months in dried form. Once cooked, dried fruits become perishable. Store unused portions in covered containers and use within a few days.

Points To Remember

- Vegetables are the parts of plants which may be used as food. They also include the fruits of some plants.
- Vegetables can be classified by part of plant, color, flavor, and moisture content. Vegetables include the roots or tubers, bulbs, stems, leaves, flowers, pods and seeds, and fruit of edible plants. They may be white, yellow, green, or red. They may be strong- or mild-flavored. Their moisture content may be high or low or they may be dried.
- Fruits may be classified by their shape, structure, and other characteristics. Fruits include pomes (with cores), drupes (with pits), berries, citrus fruits, melons, and tropical fruits.
- Vegetables and fruits are available in fresh, canned, and dried or dehydrated forms.
- Vegetables and fruits add color, texture, flavor, size, and shape as well as nutrients to a meal. They may be served at any meal and at any part of a meal.
- Vegetables and fruits must be washed before using. Unusable parts should be discarded. Many need scraping or paring. Leafy vegetables need crisping. They may be cut into a variety of shapes depending on their intended use. Low-acid fruits must be treated to prevent discoloration.
- To retain their original food value, color, flavor, and texture, cook fresh vegetables and fruits in as little water as possible for as short a time as possible.
- Sugar reduces the effects of moist heat on the cellulose of fruit.
- Fresh vegetables may be blanched before cooking to enhance their color or to make their strong flavor taste milder.
- Boiling is the most popular method for cooking fresh vegetables. Boiling can be used for fresh, frozen, canned, dried, or dehydrated vegetables.
- Fresh vegetables should be added to boiling salted water, returned to boiling, cooked until just tender, drained, and served immediately. Canned vegetables are heated only to serving temperature. Dried vegetables and fruits are cooked slowly in their soaking water until tender. Seasonings are added after cooking.
- Steaming is a fast method for cooking vegetables which retains nutrients and preserves their natural color. Steaming may be done in a steam-jacketed kettle, pressure steamer, or free steamer.

- Vegetables and fruits may be baked whole or in pieces. Solid, low-moisture vegetables may be baked in their skins whole or in serving-size pieces. For casseroles, vegetables and fruits are cut in pieces and are baked in a sauce or other liquid (scalloped) or are topped with buttered bread crumbs or cheese (au gratin).

- Sauteed vegetables are cooked in a small amount of butter, margarine, or oil. In Chinese cooking, this technique is called stir-frying.

- Deep-fat fried potatoes are called French fried. Potatoes for deep-fat frying may be cut in any variety of shapes—regular, shoestring, or thick-steak. They may be straight-cut, crinkle cut, or wedge cut. Potato rounds are bite-sized pieces formed from shredded potatoes.

- Some vegetables are dipped in a batter then fried in deep fat. Vegetables or fruits mixed with batter and fried in deep fat are called fritters.

- A few vegetables and fruits like tomatoes and grapefruit may be broiled.

- Small quantities of vegetables may be cooked in a microwave oven.

- Vegetables should be served immediately after cooking. They may be garnished with spices and herbs, sauces, or other foods. Fruits may be garnished with whipped cream, ice cream, dessert sauces, nuts, mint, crumbs, or other fruits.

- Fresh prepared vegetables should be kept refrigerated. Cooked vegetables should be served immediately. Leftovers should be used in soups or casseroles. Fresh fruits should be prepared just before serving. Leftover cooked and canned fruits and fruit juices should be refrigerated.

Words To Know

berries
blanching
boiling
carton
core
cottage potatoes
crates
dehydrated
dicing
dried
drupes
flat
free steam
free steamer
fritters
legumes
lug
melon
mincing
overripe
pit
pome
potato rounds
pounds per square inch (psi)
sauteed
scalloped
shoestring potatoes
shredding
slice
stir-frying
tropical fruit
underripe
U.S. Grade A Fancy
U.S. Grade B Choice
U.S. Grade C Standard

Questions For Review

1. Name the parts of plants which may be eaten as vegetables. Give three examples of vegetables from each part of a plant.

2. Name three vegetables in each of the following classifications:
   a. white
   b. yellow
   c. green
   d. red
   e. strong-flavored
   f. mild-flavored
   g. high-moisture
   h. low-moisture
   i. dry

3. Give three examples of each kind of fruit:
   a. pome
   b. drupe
   c. berry
   d. citrus fruit
   e. melon
   f. tropical fruit

4. Name the four forms in which vegetables and fruits may be purchased. Describe three criteria for selecting each form.

5. Identify three menu uses for fruits and three for vegetables.

6. Describe preparation needed for vegetable and fruits before cooking.

7. What principles should be observed in cooking vegetables and fruits?

8. Describe six methods which may be used to cook vegetables and fruits.

9. Describe procedures for serving and garnishing vegetables and fruits.

10. Describe procedures for holding and serving vegetables and fruits.

23 Chapter Twenty-three
Breads

COMPETENCY TO DEVELOP

- Prepare breads.

OBJECTIVES TO ACHIEVE

- Identify types of breads.
- Identify the ingredients used in breads.
- Identify menu uses of breads.
- Describe methods of preparing breads.
- Identify convenience bread products available.
- Describe procedures for serving breads.
- Summarize procedures for holding and storing breads.

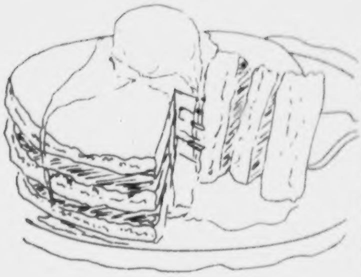
Fresh, hot bread is often the featured menu item which draws people back to a food service establishment. The bread may be prepared in the kitchen from scratch or from a mix, or it may be purchased from a bakery. If the products are high in quality and served hot and fresh, the effect is the same—repeat customers.

Types of Bread

The basic ingredients in all breads are flour, a liquid, a leavening agent, flavorings, and often fat and eggs. A leavening agent is a substance which makes a flour mixture rise until it is light in proportion to its size. Breads are classified by the type of leavening agent used as either quick breads or yeast breads. Each has a place on the food service menu.

QUICK BREADS

Some breads are called quick breads because they take less time to prepare than yeast breads. Quick breads are faster to prepare because they use quick-acting leavening agents rather than yeast to make them rise and become light. Quick breads are leavened by baking powder, soda, air, or steam. These leaveners act quickly, so the product can be baked at once. Popular quick breads include biscuits, muffins, cornbread, popovers, pancakes, waffles, and loaf breads.



Quick breads are mixtures of flour, liquid, and leavening. They may be classified by the proportion of flour to liquid. The more flour in proportion to the liquid, the thicker the mixture will be. Thinner flour mixtures are called ***batters***. Batters can be thin enough to pour or thick and sticky. Very thin batters are called ***pour batters***. They contain about one cup of flour for each cup of liquid. Pancakes, waffles, and popovers are made from pour batters. ***Drop batters*** are too heavy to pour, but too sticky to handle. They contain about two cups of flour for each cup of liquid. Drop batters are used to make muffins, coffee cakes, and some biscuits and quick loaf breads. Thick flour mixtures are called ***doughs***. ***Soft doughs*** are stiff enough to handle and roll into shapes. The usual proportion is three cups of flour to each cup of liquid. Biscuits, scones, doughnuts, and some coffee cakes are made from soft doughs.

Quick bread mixes can be made in the food service establishment during a slow period for use later. Quick bread mixes are made by sifting together the dry ingredients and then cutting in the shortening. The mix can be stored up to 6 weeks without refrigeration or longer in the refrigerator. Many food service establishments use a commercial mix.

YEAST BREADS

Yeast breads rise much more slowly than quick breads. Yeast breads use yeast as the leavening agent. ***Yeast*** is a one-celled plant that grows by a process called budding. ***Budding*** means that new yeast plants form from cells which branch out from a yeast plant. Yeast feeds on starch and sugar. It grows best at temperatures between 78-85°F. The yeast dies at temperatures over 140°F. In a moist environment with adequate food and at the correct temperature, the yeast grows. It produces carbon dioxide which slowly stretches the dough, causing it to rise. This process takes several hours. However, a new "instant yeast" product which greatly reduces rising time is available.

Yeast breads have a pleasant, distinctive aroma, flavor, and texture. They may be made from white, whole wheat, or rye flour, or a mixture of all three. They may be plain or sweetened. Sweetened yeast breads include coffee cakes, sweet rolls, doughnuts, and Danish pastries. Yeast breads may be shaped into loaves or rolls. They may be baked in the oven or fried in deep fat. The crust may be hard or soft. A yeast dough forms the base for pizza.

Ingredients Used in Breads

Flour, liquid, leavening, and salt are the basic ingredients in all breads. Sugar or syrup, fat, eggs, and flavorings are included in many breads.

FLOUR

Flour is made from finely ground grain. The flour must contain enough protein to form the structure or body of the bread. When liquid is mixed with flour, a substance called gluten (GLUE ten) is formed from the protein in the flour. Gluten is the elastic framework that stretches and holds the gas bubbles formed by the leavening as the batter or dough rises. Because gluten is a protein, it hardens when the product is baked. The gluten supports the flour mixture so the bread will not fall apart when baking is completed.

White wheat flour is the best flour for making breads. ***White flour*** is milled after the bran and germ have been removed from the wheat. It may be bleached or unbleached. White flour is usually enriched with thiamin, riboflavin, niacin, and iron: the nutrients lost in milling.

Wheat flour is made from ***hard*** or ***soft wheat***. ***Bread flour*** is made from hard wheat. It contains more gluten or protein than other flour. It is used by bakers who make large quantities of bread. ***All-purpose flour*** is milled from a blend of both hard and soft wheats. It contains enough protein to provide the gluten essential to make the breads and rolls made in most food service establishments.

Whole wheat, graham, rye, and other specialty flours add flavor and variety to breads. Meals like cornmeal and oatmeal are used to add texture and flavor to some breads. These meals and specialty flours do not have enough gluten to develop a desirable bread structure. They should be combined with white wheat flour to ensure a light product.

Self-rising flour has baking powder and salt added. Self-rising flour saves time when making bread.

LIQUID

The liquid used in making bread is usually water or milk. Sour milk, buttermilk, potato water, or fruit juices add a special flavor.

Water makes the texture of the bread coarse and chewy. The crust will be crisp. Water is used for French and Italian bread and hard rolls.

Milk adds flavor and nutrients to bread. It improves the color and texture of the bread. Using milk results in bread with a fine velvety grain. It also helps the product stay fresh longer. Fresh, evaporated, or dried milk may be used.

LEAVENERS

A ***leavener*** is a substance which makes a baked product rise so it is light in proportion to its size. Leaveners include chemicals, yeast, air, and steam.

Only a small amount of leavener is needed. Too much causes a coarse product that dries out easily. Too little results in a product with a fine grain, small volume, and a rough crust. Leaveners must be measured carefully.

Chemical Leaveners

Chemical leaveners are chemicals which react with moisture and heat to form the gas, carbon dioxide. Chemical leaveners are used in quick breads because they react quickly. The two major quick-acting chemical leaveners are baking powder and baking soda.

Baking powder is a mixture of baking soda, an acid salt like cream of tartar, and a starch like cornstarch. When liquid is added, the acid salt dissolves and reacts with the soda forming carbon dioxide. When heat is added, the reaction speeds up, the gas expands, and the product rises. Baking powder is the most common leavening agent for quick breads.

Baking powder may be single-action (fast-acting) or double-action (slow-acting). ***Single-action baking powder*** releases its carbon dioxide as soon as moisture is added. The action speeds up when heat is applied. Because it acts so quickly, the product must be mixed, prepared for baking, and placed in the oven quickly. For this reason, single-action baking powder is seldom used in commercial baking. ***Double-action baking powder*** requires both moisture and heat to completely release all of its carbon dioxide. It acts much more slowly than single-action baking powder. This makes it more desirable for commercial baking.

Baking soda is another substance that reacts with acid to produce carbon dioxide. Baking soda plus an acid such as sour milk or buttermilk is used to leaven some quick breads. The heat of the oven causes the gas to expand and the product to rise.

Yeast

Two types of yeast are used in baking–fresh yeast and dry yeast. ***Fresh yeast*** is purchased in compressed cakes. It is purchased in 1-5 pound blocks. Compressed yeast may be kept 4 to 5 weeks under refrigeration. ***Dried yeast*** is purchased in granular form. It is sealed in envelopes, cans, or jars to ensure freshness. Dried yeast gives the best results when used by the date stamped on the envelope. It does not require refrigeration.

The two types of yeast are used differently. Compressed yeast is crumbled into a small amount of lukewarm water before using. Dry yeast is sifted with the dry ingredients then mixed with other ingredients. It may also be dissolved in lukewarm water.

Yeast works best at room temperatures of 78-85°F. It is destroyed by high temperatures. Low temperature slows down yeast activity. The liquid in a recipe requiring yeast must be lukewarm. Yeast dough must be placed in a warm place to rise. This process is called ***fermentation*** or proofing.

Air

Air expands when heated. This helps a flour product rise. Air can be added to a product by beating it, folding in beaten egg whites, sifting the flour, or creaming the shortening.

Steam

The liquid in a baked product forms steam as it cooks. Steam causes a flour mixture to rise. Popovers are a bread product leavened by steam alone.

SALT

Salt improves the flavor of most bread products. It also strengthens the gluten. Salt is essential for satisfactory yeast products. It prevents the yeast from growing too rapidly. It improves the texture, color, and keeping quality of the bread. Too much salt results in a firm, compact product.

SUGAR

Many baked products contain sugar or syrup. Sugar speeds the action of yeast. However, too much sugar may slow the action of the yeast. Sugar adds flavor and makes quick breads tender. It makes the tops of muffins and other breads browner and crisper. It helps baked products stay fresh longer.

The sugar used in baking may be purchased in several forms--granulated, brown, powdered, or syrup. Syrups are thick, sweet liquids. Syrups include molasses, malt syrup, honey, corn syrup, and maple syrup.

FAT

The fat used in baking bread may be shortening, lard, margarine, butter, or oil. Fat contributes flavor, tenderness, and richness to breads. It helps the product brown and adds to its keeping quality. Fat in large amounts slows the action of yeast.

EGGS

Eggs add color, flavor, and food value to breads. They bind the ingredients together. They aid in leavening. Fresh, liquid, frozen, or dried eggs may be used in breads.

FLAVORINGS

Extracts, spices, and herbs may be used to add flavor to breads. Flavorings add flavor, aroma, and color to breads.

Menu Uses of Breads

Breads may be served as part of a meal, as a snack or appetizer, or used as an ingredient. Bread may be served as the main dish, as an accompaniment, or even as dessert.

Breads are especially popular at breakfast. Toast is probably the most popular use of bread at breakfast. Pancakes and waffles are often served as the main dish. Muffins, biscuits, and plain doughnuts go well with other breakfast foods. Sweet rolls, English muffins, croissants, and coffee cake are other breakfast favorites.

At lunch or dinner, bread may be served many ways. It frequently becomes part of a sandwich. Biscuits, muffins, and cornbread are good accompaniments to many specialties like soups and stews. Tortillas and crepes (thin pancakes rolled with filling) are other bread products popular at lunch and dinner. Freshly baked rolls or bread add to the enjoyment of most main dishes. Garlic bread is especially popular with pasta dishes. For main dishes, chicken a la king or Welsh rabbit may be served over toast points. Creamed vegetables or meat may be served in a popover. Dumplings may be added to stews. Bread cubes are a common ingredient in stuffings. Yeast dough forms the base for the ever popular pizza. Sweeter breads like gingerbreads and coffee cakes may be served for dessert. Shortcakes and fruit cobblers are other desserts featuring bread.

Mixing and Baking Breads

The methods for mixing ingredients are different for quick breads and yeast breads. The methods for preparing these breads for baking also differs.

QUICK BREADS

Quick breads require little mixing or handling. Overmixing or too much handling causes too much gluten to develop. As a result the bread will be tough. Careful mixing and handling result in a quick bread with a light, porous texture.

Two methods are used to mix most quick breads: the muffin method or the biscuit method. A third method, the cake method, may be used for some quick breads. Following the correct method results in a quality product. Desirable qualities for several popular quick breads are shown in the chart below.

Characteristics of Quality Quick Breads

Product	**Characteristics**
Muffins	Uniform shape Slightly rounded, pebbly tops Golden brown color Tender texture Even grain No big holes or tunnels Good flavor
Waffles/Pancakes	Uniform shape Evenly browned crust Tender texture Moist crumb Good flavor
Popovers	Well-popped Golden brown crust Hollow inside Walls crusty, tender, crisp Good flavor
Biscuits	Uniform size and shape Flat, level tops Crisp, evenly browned crust Tender and moist Flaky, tender texture Good flavor

Muffin Method

In the ***muffin method***, dry ingredients (flour, leavening, salt, and sugar) and liquid ingredients (beaten eggs, milk, and melted or liquid fat) are mixed separately, then combined. The mixture is stirred just enough to moisten the dry ingredients. The batter should appear lumpy. Overmixing results in flat-topped muffins with a coarse grain. The product will be less tender and may not brown properly.

Be careful to avoid additional mixing as the batter is dipped into the pans. Muffins are baked in greased muffin tins for about 25 minutes at 400°F. The muffin method is used for making muffins, popovers, waffles, pancakes, most cornbreads, and some loaf breads.

Biscuit Method

In the ***biscuit method***, the dry ingredients (flour, salt, and leavening) are combined first. A pastry blender is used to cut the fat into the flour mixture. The mixture should resemble coarse cornmeal. The liquid is added last. The dough is stirred until all of the flour is moistened. Overmixing results in a tough product.

The dough is formed into a ball and placed on a lightly floured board. It is then ***kneaded*** 15-20 strokes (about 30 seconds) by folding the dough and pressing it with the heels of the hands. The dough is rotated a quarter turn, folded, and kneaded again. Kneading distributes the ingredients more evenly and develops flakiness. Overkneading develops too much gluten and results in tough, compact biscuits.

Next, the dough is rolled to about 1/2 inch thick and cut with a floured biscuit cutter or knife. Biscuit dough may be rolled thinner and filled with cinnamon and sugar, fruit, or cheese.

Biscuits are baked on an ungreased baking sheet. For soft-sided biscuits, the sides of the dough should touch. For crusty biscuits, the biscuits should be spaced apart. Biscuits should be baked for 12-15 minutes in an oven preheated to 450°F.

Cake Method

In the ***cake method***, the shortening is creamed with the sugar and eggs. Then the sifted dry ingredients are added alternately with the liquids. Flavorings, nuts, and fruits are folded in last. This method is used for most fruit and nut loaves, as well as for coffee cake. It gives a finer texture and grain than the muffin method.

YEAST BREADS

Making yeast breads involves ten basic steps. Each step is described in the following table:

Step	Procedure
1. Measuring	Weigh ingredients on a baker's scale.
2. Mixing	Use the straight-dough method, sponge-dough method, or batter method to combine the ingredients and develop the strength of the gluten.
3. Kneading	Fold, press, and squeeze the dough to develop the strength of the gluten.
4. Fermenting	Allow the dough to rise until double in bulk.
5. Punching	Fold the dough from the sides to the middle and press to expel the gas bubbles and remix the ingredients so the yeast can grow again.
6. Resting	Allow the dough to relax for 10-15 minutes to make it easier to handle.

Step	Procedure
7. Makeup	Prepare the dough for baking by scaling, rounding, and shaping. *Scale* or divide the dough into sections. *Round* each section into a smooth mound and allow it to rest for 10 minutes. *Shape* the dough into loaves or rolls.
8. Panning	Place the dough in the pans for baking.
9. Proofing	Allow the dough to rise a final time before baking. This may be done in a proofing cabinet.
10. Baking	Cook the dough in the oven to kill the yeast, harden the gluten, and brown the sides and top.

Standards for yeast breads will vary by the type and form of the bread. A good loaf of yeast bread will have these characteristics:

Appearance	Smooth, golden brown color, with a well rounded top without cracks. The sides should be straight and a little lighter in color than the top.
Crust	Thin, but tender or crunchy, depending on the kind of bread.
Grain	Fine, free of tunnels, with no large gas holes. Bread should be tender and moist.
Flavor	Slightly yeasty with sweet, nut-like flavor.

Mixing Methods

Yeast breads can be made by several different methods: the straight-dough method, the sponge-dough method, or the batter method. In the ***straight-dough method***, all ingredients are combined and the dough is kneaded and set aside to rise. In the ***sponge-dough method***, the yeast is combined with part of the liquid, flour, and sugar to make a batter. This batter is covered and allowed to rise in a warm place until light and bubbly. The remaining ingredients are added to make a stiff dough. In the ***batter method***, the dough is mixed and shaped, but not kneaded. After shaping, it is allowed to rise only a short time. The finished product has a coarse, porous texture and tends to dry out quickly.

The most popular method in food service establishments is the straight-dough method. This method is fast and produces an acceptable product. It requires less handling than the sponge-dough method and produces a better quality product than the batter method.

To prepare yeast dough using the straight-dough method, place the sugar, salt, fat, and nonfat dry milk (if used) in the mixer bowl. Dry yeast may also be mixed with the dry ingredients. Add very warm water or hot scalded milk if liquid milk is used and mix with an electric mixer on low speed to blend. Cool the liquid mixture to lukewarm. Soften compressed or dry yeast in lukewarm water. Add the softened yeast and eggs to the milk mixture. Add enough flour to make a moderately soft dough. Mix on low speed until the mixture is smooth and has a satin texture.

Turn the dough in a lightly greased bowl, turning to grease the top. Cover the dough and let it rise or ***proof*** in a warm place until it doubles in bulk. Sometimes the dough is placed in the refrigerator overnight. This is called the ***cool-rise method***. Punch the dough down and divide it for easy handling. Knead the dough gently to distribute gas bubbles more evenly. Shape the dough into loaves or rolls. Place the dough in a pan. Let the dough rise until it doubles in bulk. Bake the risen, shaped dough in a hot oven (about 400°F).

Shaping

Yeast dough can be shaped in many different ways. It can be weighed or scaled into loaves of equal size. With a rolling pin, it can be rolled thick for sweet rolls or thin for pizza. It can be rolled into a thick cord and braided or tied into knots.

Plain Loaf. Scale or divide the dough into pieces that will fill about half a bread pan. Roll the dough into a flat rectangular piece. Fold it in thirds. Fold again into thirds. Seal the edges by pressing with the fingers. Pat the loaf until it will exactly fit the pan.

Braided Loaf. Weigh or cut equal chunks of dough. Sprinkle the chunks with flour. Roll each chunk into a long thin roll. Place three rolls side by side. Cross the strips. Alternate outside strips until the braid is finished. Seal the ends.

Plain Rolls. Form a long thick rounded strip. Cut the strip into equal chunks weighing 1 1/2 oz. each. Round each chunk.

Cloverleaf Rolls. Form a long roll of dough one-third the diameter of the strip for plain rolls. Cut the strip into equal chunks. Round each chunk. Place three balls of dough into each greased cup of a muffin pan.

Knots. Roll 1 1/2 oz. chunks of dough into 9-inch long strips. Tie into single or double knots.

Butterflake Fans. Roll a 12-oz. piece of dough very thinly into a square or rectangle. Brush with melted butter. Slice into strips about 1 1/2 inches wide. Make stacks of 5 or 6 strips. From the stacks, cut rolls about 1 1/2 inches wide. Place one roll, cut side up, in greased muffin pans.

Crescents. Weigh dough into 12 oz. portions. Roll each portion into an 8-inch circle, 1/8 inch thick. Cut into 12 triangles. Brush with melted butter or fat. Beginning at the wide base, roll each triangle. Curve the dough to form a crescent. Place on greased baking sheet 1 1/2 inches apart.

Proofing

When large quantities of yeast bread are made regularly, proofing is done in a ***proofing cabinet***. The proofing cabinet maintains a temperature of about 100°F and a humidity of 80 to 85 percent. The warmth and high humidity provide ideal conditions for the rising dough. It also reduces the time required for proofing.

Baking

Pans of proofed bread must be handled carefully to prevent the dough from collapsing as it is placed in the preheated oven. Preheat conventional and deck ovens slightly above the desired temperature. Preheat the carousel oven to the exact temperature required. Preheat convection ovens about 25 to 50°F lower than conventional ovens. Bake loaves and rolls at 375°. For loaves, baking may be started at 425°F, then the temperature lowered to 375°F.

The heat of the oven speeds the growth of the yeast for the first fifteen minutes. Then the gluten and starch begin to coagulate, making the product firm. The sugar in the dough causes the crust to brown and become glossy or bloom. Dough weighing 1 1/2 pounds bakes in about 35 minutes at 375°F, yielding a 1-pound loaf. Rolls bake in 15-30 minutes depending on their size. Sweet rolls are baked at a slightly lower temperature.

Rolls and hard-crusted breads may be removed from the oven when baked, but not browned. The browning is completed just before serving.

Sweet Yeast Breads

Sweet yeast breads include sweet rolls, doughnuts, and Danish pastries. They are made from a very rich dough. The dough has a higher proportion of sugar, shortening, and eggs to flour. Danish pastries contain twice as much shortening as other sweet yeast breads. Sweet yeast breads are sweeter, more tender, and less chewy than other yeast breads.

The standards for sweet rolls vary with the kind being made. Some rolls are very sweet and sticky, others are flaky. But all of them should be golden brown, tender, and flavorful, with a delightful yeasty taste.

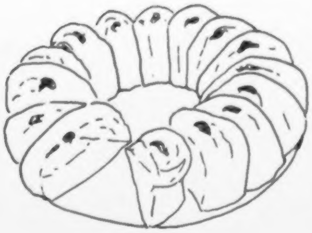
Sweet doughs are mixed by a different method than other yeast doughs. The shortening, sugar, salt, and flavorings are ***creamed*** or mixed together until fluffy. Liquid milk or dry milk solids are added and the mixture is creamed again. Eggs are added one at a time and beaten on medium speed. Yeast may be softened and added to the milk mixture or dry yeast may be mixed with the last addition of flour. The flour is added gradually and mixed thoroughly on low speed after each addition. The dough is then kneaded for several minutes at medium speed. (Note: Danish pastries are *not* kneaded.) A temperature of 78-82°F must be maintained while mixing the dough because of the low gluten content.

Too much mixing causes the temperature to rise. Over-mixing causes the dough to become sticky and difficult to handle. Proper mixing results in a smooth elastic dough.

Sweet dough is allowed to rise less than other yeast dough. Less fermentation is required because of its high sugar content.

Many sweet rolls can be made from the same basic recipe. Their shapes may be varied. Fillings and toppings can be added for additional variety. Cinnamon and sugar is a popular filling. Others contain nuts, raisins, or dates. Commerical fillings may be used to save time.

Cinnamon Rolls. To shape cinnamon rolls, roll a square or rectangle of dough (10 oz). Sprinkle the dough with cinnamon and sugar and roll into a log shape. Brush or ***wash*** the dough with a mixture of egg and water. Cut the rolled dough into slices about 1/2 inch thick. Place the swirls of dough in a pan. Spread with melted butter and let rise. Bake. Cool, then ice.



Coffee Ring. Fill and roll the sweet dough as for cinnamon rolls. Form mix into a ring connecting the ends. Slashes may be cut in the dough about 1 inch apart if desired.

Doughnuts. Roll the sweet dough about 1/2 inch thick. Cut the dough into pieces weighing about 1 1/2 oz. Proof 10-20 minutes. Using a doughnut cutter, cut the doughnut and hole from the dough. Cook in hot deep fat at 360°F for 2-2 1/2 minutes. After frying, dip in fine granulated sugar or a mixture of cinnamon and sugar, or glaze with a sugar syrup.

Danish Pastries. The ***roll-in process*** makes Danish pastries unique. Roll the dough into a rectangle about 1/2 inch thick. Spread two-thirds of the dough with a special roll-in shortening. Fold the unspread portion over the center section. Fold the remaining section over the two folded sections. Refrigerate the dough for 20-30 minutes to slow or retard the growth of the yeast. The roll-in process followed by slowing the growth of yeast may be repeated several times at intervals. The result is a very flaky yeast pastry.

After the final roll-in, cut the dough into 10-ounce pieces. Roll each section about 8 inches long and 1/8 inch thick. Wash the dough with water or an egg white and water mixture. Spread the dough with a filling of almond or fruit paste. Roll up the dough and cut into 1-inch rolls. Place in a pan lined with silicone paper. Brush with an egg wash and proof.

Bake sweet rolls, coffee cakes, and Danish pastries at 375°F for 20-30 minutes or until golden brown. Immediately glaze with a sugar and water syrup. The glaze improves the appearance of sweet yeast breads and makes them keep longer. Ice with a mixture of powdered sugar, shortening, salt, and hot water if desired.

Convenience Bread Products

Both quick breads and yeast breads are available in convenience forms. A variety of mixes are available. Most result in products comparable to those made from scratch.

Canned biscuits, rolls, and pastries are available. These products are ready to be panned.

Commercial bakeries can provide a variety of breads and pastries. Some commercial bakery products are ready to serve, others require reheating or browning. Most food service establishments purchase some or all of their breads from commercial bakeries.

Serving Breads

Breads are best served hot from the oven. When placed on the table, breads and rolls should be hot and covered with a napkin to retain the warmth.

Holding and Storing Breads

Homemade breads become stale quickly. As soon as the bread is cool, wrap it or place it in an air-tight moisture-proof container. This prevents drying and loss of freshness. In warm weather, bread may be stored in the refrigerator to retard the growth of mold and the spoilage of the bread.

When breads are not served immediately, they may be frozen in a moisture-proof wrapper for future use. Frozen breads keep for several months. To thaw, let the bread stand unopened at room temperature for about 30 minutes. To serve warm, remove the bread from the container or wrapper and heat in a moderate oven for 20 minutes, or heat it briefly in a microwave.

Stale bread can be used. French toast, grilled sandwiches, stuffings, or bread puddings can be made from stale bread.

Points To Remember

- Fresh, hot bread is often a featured menu item that attracts customers in food service establishments.
- The basic ingredients in all breads are flour, a liquid, a leavening agent, flavorings, and often fat and eggs.
- Breads are classified by the type of leavening agent used as either quick breads or yeast breads. Baking powder and baking soda are chemical leaveners used in quick breads.

- Popular quick breads include biscuits, muffins, cornbread, pancakes, and waffles. Depending on the proportion of flour to liquid, quick breads may be formed from pour batters, drop batters, or soft doughs.

- Popular yeast breads are loaves, rolls, coffee cakes, sweet rolls, doughnuts, and Danish pastries.

- Gluten is an important substance in flour that forms the elastic framework of bread as the batter or dough rises. Some types of flour contain more gluten than others.

- Leaveners make a bread product rise. Leaveners include chemicals, yeast, air, and steam.

- Salt is an essential ingredient for satisfactory yeast products.

- Breads have many menu uses. They may be served as part of a meal, as a snack or appetizer, or used as an ingredient. Bread may be served as a main dish, as an accompaniment, or even as a dessert.

- The muffin and biscuit methods are used for mixing ingredients for most quick breads. Quick breads require little mixing or handling. Overmixing or too much handling causes too much gluten to develop.

- Yeast breads are made by the straight-dough, sponge, and batter methods. Yeast doughs and batters are allowed to rise before they are baked. Straight-dough and sponge-dough breads are kneaded at one or more points in their preparation.

- Popular yeast roll shapes are plain, knots, butterflake, fan, and crescent.

- Sweet dough is allowed to rise less than other yeast dough. Less fermentation is required because of its high sugar content.

- Breads are best served hot from the oven.

- To hold and store bread, wrap it or place it in an air-tight moisture-proof container. Breads frozen in a moisture-proof wrapping keep for several months.

Words To Know

all-purpose flour
baking powder
baking soda
batter method
batters
biscuit method
bread flour
budding
cake method
chemical leaveners

hard wheat
kneaded
leavener
muffin method
pour batters
proof
proofing cabinet
roll-in process
self-rising flour
single-action baking powder

cool-rise method
double-action baking powder
doughs
dried yeast
drop batters
fermentation
flour
fresh yeast
soft doughs
soft wheat
sponge-dough method
straight-dough method
wash
white flour
yeast

Questions For Review

1. What ingredient distinguishes quick breads from yeast breads?

2. Name six popular quick breads.

3. What is the usual proportion of flour to liquid for pour batters, drop batters, and soft doughs?

4. Name six popular yeast breads.

5. Discuss the following in regard to gluten content.
   a. white flour
   b. hard wheat flour
   c. soft wheat flour
   d. bread flour
   e. all purpose flour
   f. whole wheat, graham, or rye flour
   g. cornmeal and oatmeal
   h. self-rising flour

6. How does baking powder differ from baking soda? What other ingredient used in making bread activates baking powder? Baking soda?

7. Why is salt an essential ingredient in yeast breads?

8. How do each of the following ingredients affect the preparation and the characteristics of yeast breads?
   a. sugar
   b. fat
   c. eggs
   d. water

9. List three breads or bread products that are popular at the following meals:
   a. breakfast
   b. lunch
   c. dinner

10. Describe the muffin method for mixing quick breads. How does the biscuit method differ from the muffin method?

11. Explain the basic differences in the straight-dough, sponge-dough, and batter methods of making yeast breads. How do the end products differ?

[redacted]

12. What is the difference in fermentation and proofing?

13. Describe each type of yeast product below. What procedures are followed for shaping each product?
    a. loaf
    b. plain rolls
    c. clover leaf rolls
    d. knots
    e. butterflake fans
    f. crescents
    g. cinnamon rolls
    h. coffee ring
    i. Danish pastries

14. What convenience bread products are available to food service establishments?

15. Why are breads usually covered with a napkin when served?

16. What procedures should be followed when holding breads to be served later? When freezing breads to be served later?

24 Chapter Twenty-four
Desserts and Cookies

COMPETENCIES TO DEVELOP

- Prepare fruit desserts and fried desserts.
- Prepare puddings, custards, souffles, gelatin desserts, and frozen desserts.
- Make cookies, cakes, pies, pastries, and meringues.

OBJECTIVES TO ACHIEVE

- Name the types of desserts served in food service establishments.
- Identify convenience desserts used in food service.
- Summarize the techniques for preparing a variety of desserts.
- Describe procedures for serving and garnishing desserts.
- Outline procedures for holding and storing desserts.
- Identify the basic types of cookies.
- Identify convenience cookie products used in food service.
- Summarize techniques for preparing the basic types of cookies.
- Summarize techniques for coloring, icing, and garnishing cookies.
- Describe procedures for serving cookies.
- Outline procedures for holding and storing cookies.

Desserts add a finishing touch to a meal. The sweetness they provide make a meal more satisfying. Memorable desserts are often the key to repeat customers.

Types of Desserts

Desserts may be plain or fancy. The variety is endless. Desserts include familiar ones like cookies, cakes, pastries, and pies. These desserts are discussed in separate sections of this text. A variety of other desserts may be conveniently classified as fruit, gelatin, milk, or frozen desserts.

FRUIT DESSERTS

Fruit desserts are both colorful and flavorful. Fresh, frozen, canned, or dried fruits can be served for desserts.

Fresh fruits make eye-appealing light desserts. Whole, quartered, sectioned, or sliced fresh fruits are often served on a tray with cubes or wedges of cheese for a simple, but satisfying, dessert. Melon halves, fruit cups, and fruit ambrosia are other popular light desserts. Fresh fruits can be baked or used to make a sauce. Sliced fresh fruits make attractive toppings for cakes, puddings, custards, and pies.

Canned fruits are usually served chilled. Frozen fruits are thawed and served ice cold. Dried fruits may be served alone or as a dessert ingredient. Several dried fruits can be cooked in a simple syrup to make a ***fruit compote*** (CAHM pote). Cooked dried fruits are also used in ***fruit whips*** made from cooked fruit pulp mixed with either beaten egg whites or whipped cream.

Fruits are used as ingredients in a variety of other desserts. Some popular desserts which include fruit as an ingredient are souffles, dessert crepes, fruit fritters, fruit turnovers, shortcakes, dumplings, cobblers, crisps, Bettys, cake rolls, upside-down cake, fruit pies, pastries, and frozen desserts. Souffles are mentioned in Chapter 20, Eggs and Cheese. Crepes are mentioned in Chapter 23, Breads. Cakes are in Chapter 25, Cakes and Icings. Pies are in Chapter 26, Pastries and Pies.

Fruit fritters and fruit turnovers are fried fruit desserts. ***Fruit fritters*** are deep-fried pieces of batter-dipped fruit. ***Fruit turnovers*** are folded squares of pastry filled with sweetened fruit. Fruit turnovers or fried pies are the most popular type of dessert in fast foods.

Shortcakes, dumplings, cobblers, crisps, and Bettys are baked fruit desserts. ***Shortcakes*** are sweetened fresh fruit spread between layers of sweet biscuits, angel food cake, or sponge cake. Additional fruit and whipped cream are used as toppings. Strawberry and peach shortcakes are especially popular. ***Dumplings*** are baked squares of pie or biscuit dough filled with sweetened fruit. The corners of the dough are folded to the center to cover the fruit filling. ***Cobblers*** are a fruit filling topped with sweetened biscuit or pie dough and baked. The dough may be cut in fancy shapes. ***Crisps*** are fruit fillings topped with a mixture of flour, nuts, sugar, and shortening and baked. Apples, peaches, pears, blueberries, and other fruits may be made into crisps. ***Bettys*** are made by layering sweetened fruit and cake or bread crumbs. When baked, the bottom layer of crumbs becomes soft while the top layer is brown and crisp.

GELATIN DESSERTS

Gelatin desserts may be simple or elaborate. They range from fruit-flavored gelatin squares to elaborate souffles. Gelatin desserts include whips, sponges or snows, creams, mousses, and souffles.

Gelatin whips are gelatins which have been beaten to the consistency of whipped cream and then chilled until set. ***Sponges*** or ***snows*** are gelatins to which beaten egg whites are added.

Gelatin creams are smooth, velvety desserts which use a hot pudding or soft custard as the liquid for dissolving the gelatin. For a ***Spanish cream***, a gelatin cream is molded. Beaten egg whites may be added when the cream is partially set. For a ***Bavarian cream***, whipped cream is folded in when the custard base is partially set. A ***charlotte*** is a cherry flavored Bavarian cream which may be molded with ladyfingers or sponge cake. A ***mousse*** is a frozen Bavarian cream.

Some souffles (sue FLAYS) are made with gelatin rather than baked. This type souffle is more stable and less likely to fall than a baked souffle. For this reason, they are easier to prepare than baked souffles.

MILK DESSERTS

Puddings and custards are the two general groups of milk desserts. Puddings and custards are soft, sweet, thickened desserts. ***Puddings*** are thickened with starch. ***Custards*** are thickened with eggs. Baked Souffles are extremely delicate milk desserts and are challenging to make.

Puddings

Puddings are usually grouped according to the starch ingredient used to thicken them–cornstarch, tapioca, or rice. Bread, farina (coarsely ground wheat), and cornmeal can also be used to thicken puddings. Cornstarch puddings can be made in many flavors such as vanilla, chocolate, butterscotch, and coconut. Most food service operations use mixes to make puddings. Canned and frozen puddings are also available.

Custards

Custards may be either baked or soft. Both are made from milk, eggs, sugar, and flavorings. A ***baked custard*** is baked in the oven until it sets or gels. A ***soft custard*** is simmered over hot water or stirred constantly over low heat. A soft custard is really a dessert sauce. A soft custard should be the consistency of heavy cream. It should be smooth, velvety, sweet, and light yellow in color. Vanilla is the most common custard flavor. Because of their high nutritive value and ease of digestion, custards are often associated with foods served at hospitals or nursing homes.

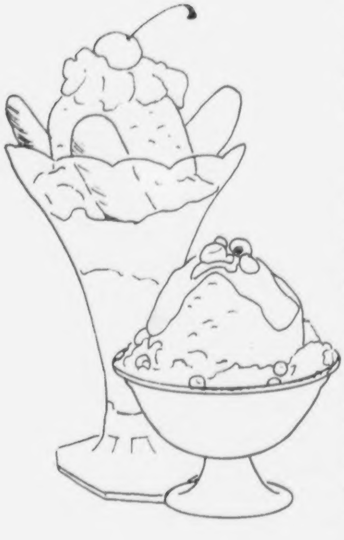
Custards can be used in various ways. Soft custard may be served alone or as a sauce for cakes, steamed puddings, fruits, or gelatin. ***Floating island*** features islands of lightly toasted meringue floating on soft custard. ***Trifle*** is made by pouring soft custard over cake spread with jam. A Spanish ***flan*** (FLAHN) is made by putting caramel syrup in a baking dish before pouring in the custard mixture. When the baked custard is turned out of the baking dish, the caramel syrup will flow over the custard like a sauce.

Baked Souffles

A ***baked souffle*** is a light puffy milk dessert. It is leavened by beaten egg whites. It is baked in a fluted ceramic dish the appropriate size for the recipe. Chocolate souffle is the most popular flavor.

FROZEN DESSERTS

Frozen desserts include ices, sherbets, ice creams, ice milks, parfaits, and mousses. ***Ices*** are made from sweetened fruit juices. ***Sherbets*** are made with sweetened fruit juices and milk. They may contain beaten egg whites or gelatin. ***Ice creams*** are made from cream, milk, and sugar. French ice creams also contain eggs and are made from a soft custard base. Ice creams may be combined with fruits, nuts, cookie or cake crumbs, syrups, candy bits, and flavorings such as chocolate, vanilla, or peppermint. Food services usually purchase ice cream in 2 1/2 or 5 gallon containers. ***Ice milks*** are made from the same ingredients as ice creams, but contain less fat.



Many popular desserts are made with ice cream or sherbet. When pie or cake is topped with a scoop of ice cream, it is called ***a la mode***. Ice cream topped with a dessert sauce becomes a ***sundae***. The sundae may be garnished with whipped cream, chopped nuts, and a cherry. An ***ice cream soda*** contains a mixture of ice cream, carbonated water, and syrup topped with whipped cream and a garnish. A ***Peach Melba*** is made with a scoop of ice cream on a slice of sponge cake, a peach half, and whipped cream covered with slivered almonds and Melba sauce. A ***baked Alaska*** is a brick of ice cream encased in sponge cake and iced with a soft meringue sprinkled with slivered almonds. The dessert is placed in a hot oven until the meringue browns and is served immediately. ***Ice cream pies*** are made in a baked pie shell or a crust made of graham crackers or cookie crumbs, filled with softened ice cream mixture, and refrozen. Two or three flavors of ice cream may be layered. The ice cream pie may be garnished with whipped cream and fruit or it may be covered with a meringue and browned in the oven like a baked Alaska.

The term ***parfait*** (par FAY) refers to two different frozen desserts. One is a rich frozen dessert made by pouring a sugar syrup like butterscotch or raspberry syrup over beaten egg yolks or egg whites. Whipped cream and flavoring are then folded into the mixture. The mixture is frozer without stirring. Parfaits made with egg yolks are called golden parfaits. Those made with egg whites are called angel parfaits. The other type of parfait is made by layering different foods in a tall glass. The layers may be ice cream, gelatin, or fruit. These parfaits are usually topped with whipped cream, chopped nuts, and fruit. The second type of parfait is frequently served in fast food establishments.

A mousse is another very rich dessert made with sweetened whipped cream and flavoring. The mousse may contain gelatin, but may also be made without gelatin.

Convenience Desserts

A variety of convenience products are used for desserts in food service. Convenience forms are available for most types of desserts.

Fresh fruits, though not actually convenience products, are among the most convenient desserts to prepare. Processed fruits including canned, dried, and frozen products are also convenient to use.

Mixes are available for puddings, custards, pie fillings, pastry, cakes, and gelatin. Pudding mixes may be of the instant variety or they may require cooking. Canned puddings and pie fillings save even more time and energy. Frozen puddings are also available. Prepared sheets of gelatin may be purchased commercially. Whipped toppings are available as mixes or in pressurized cans.

Many baked desserts are available frozen or ready-to-eat. Some must be baked, others only warmed. Most food service operations buy commercially frozen ice cream, ice milk, ices, and sherbets.

Preparing Desserts

The skills needed for preparing desserts range from minimal to extensive. Preparation may be as simple as washing, drying, peeling, or slicing fresh fruits, or as elaborate as preparing a baked souffle.

FRUIT DESSERTS

Fruit desserts are among the easiest desserts to prepare. Fruits are naturally colorful and tasty and are often served fresh.

Fresh Fruits

Fresh fruits require little preparation. Wash and dry fresh fruits to be served whole. Polish apples, pears, and plums with a soft cloth. Treat peeled and sliced bananas, apples, and other fruits which darken with ascorbic acid or lemon juice to prevent discoloration. A simple syrup will also prevent darkening. A ***simple syrup*** is made by boiling sugar and water until clear. The syrup should be cooled before using. Peel and section citrus fruits over a bowl to catch the juice. Be sure to remove all the seeds.

Canned Fruits

Select only the finest grade (Grade A) canned fruit to serve as desserts. The number of servings can be determined by the number, or count, of the whole or half pieces stated on the label. A Number 10 can of large peach halves might have a 22 count, but medium peach halves a 35 count.

Dried Fruits

Dried fruits are graded by size. Select the largest size to serve whole or in a fruit compote. The larger sizes are more expensive. To save money use smaller sizes in purees and sauces.

To cook dried fruits, cover with cold water in a saucepan. Heat and simmer until tender. If more sweetness is desired, add sugar after cooking the fruit.

Frozen Fruits

Frozen fruits may be dry packed or sugar packed. The amount of sugar to fruit may vary. Frozen fruits packed for food service show the sugar ratio on the package. The ratio of fruit to sugar may range from 3:1 to 5:1. The sugar in a recipe must be decreased accordingly.

Do not thaw frozen fruits until an hour before use. Frozen fruits lose quality rapidly after thawing.

Cooked Fruits

Baking is the method most frequently used to cook fruits in the food service establishment. Apples and pears may be baked whole. Fried pies are popular desserts in fast food service.

Frozen apple or cherry turnovers are used in fast food establishments to make fried pies. The frozen tart is fried quickly in deep fat, wrapped, and kept hot under a heat lamp. The hot fried pie should be held no longer than 45 minutes.

GELATIN DESSERTS

Both flavored and unflavored gelatin are used in desserts. Strawberry, raspberry, cherry, lemon, orange, and lime are all popular flavors. If fruit is to be added, match the flavors of the fruit and the gelatin.

To ensure a firm gel, use 1 1/2 lb. of flavored gelatin and 2 1/2 oz. of plain gelatin per gallon of liquid. Use of too much gelatin will produce a tough, rubbery product. Use of too little gelatin will result in a runny product which will not set.

To prepare gelatin, dissolve flavored gelatin in boiling hot water. Add the remaining water cold or in the form of shaved ice for a quick set. Fruit juice may be substituted for part or all of the water. Pour the gelatin into a shallow pan or mold and refrigerate until set. For unflavored gelatin, soak the gelatin in cold water for 5 minutes, then dissolve in hot water or fruit juice. Cool the mixture and pour into a mold. Refrigerate until set. Allow at least four hours before service. The gelatin should be firm but delicate.

To add fruit, refrigerate the gelatin mixture until partly set, about the consistency of unbeaten egg whites. Stir in the chopped fruit and pour into a mold. Refrigerate until set. Any fruit may be used with gelatin except fresh pineapple. Fresh pineapple contains an enzyme that prevents gelatin from gelling.

To make a whipped gelatin, refrigerate the gelatin until partly set. Place the bowl in a large bowl of cracked ice and whip with a beater until white and frothy. If the gelatin has not set long enough first, the whip will not hold and the dessert will collapse. Pour the whipped gelatin into a mold and refrigerate until set.

To add whipped egg whites or whipped cream, refrigerate the gelatin until partly set. Whip egg whites to stiff peaks, then whip the gelatin into the whites. Whip cream just until stiff, then fold into the gelatin. After adding the whipped egg whites or whipped cream, pour the mixture into a mold. Refrigerate the mold until the gelatin is set.

MILK DESSERTS

Milk is the main ingredient in milk desserts. The ingredients in puddings and custards are similar. All contain milk, sugar, salt, eggs, and flavoring. The main difference is the thickener. Puddings are identified by the thickener used–cornstarch, tapioca, rice, or bread. In puddings, eggs are used for color and flavor, and provide some of the thickening. A custard is thickened entirely by the eggs, so more are needed.

Puddings

Puddings may be made on top of the range or baked in the oven. To prepare puddings on top of the range, mix the thickener, sugar, salt, and milk together first. The milk for cream puddings should be ***scalded*** by heating to 180°F to prevent scorching. Cook over medium heat until thick. Stir constantly if the pudding is cooked in a saucepan. Stir occasionally if the pudding is cooked over hot water in a double boiler. Add the slightly beaten eggs to part of the hot mixture, then add the egg mixture to the rest of the hot mixture. Cook for about three minutes. The pudding should be creamy and smooth. It should be neither too thick nor too thin. It should not be lumpy. If pudding becomes lumpy, try beating it on high speed with a food mixer.

Remove the pudding from the heat and add the flavoring. Extracts like vanilla lose their flavor and aroma during cooking, so they should be added after the pudding is cooked. Cool the pudding and refrigerate. Covering the pudding with waxed paper or transparent wrap will prevent a skin from forming on the top of the pudding as it cools. Refrigerate immediately.

To prepare a baked pudding, combine the thickener, milk, sugar, salt, flavoring, and eggs. Pour the mixture into a greased baking dish. Place the baking dish in a larger pan. Pour water around the baking dish. Bake the pudding at 300°F until set.

Custards

Since eggs are used to thicken custards, more eggs are required than for puddings. Generally the proportion of milk to eggs is four cups milk per egg. A true custard uses only eggs for thickening, but some custards use a combination of eggs and starch. These types of custard are more commonly used in food service. They are easier to make and cost less.

To make a baked custard, scald the milk in a double boiler over low heat. Beat the eggs slightly and add the sugar, salt, and cornstarch, if used. Mix a small amount of cold milk with the eggs. Pour the egg mixture into the hot milk stirring constantly. Pour the mixture into a butter baking dish or custard cups. Sprinkle the top with grated nutmeg. Set the baking dish into a larger pan of boiling water to avoid curdling. Bake in the oven about one hour at 325°F. The custard is done when a knife inserted in the custard comes out clean. Baked custard that separates during baking is overcooked. A baked custard should be tender and quivery. It should be firm enough to hold its shape when spooned for serving. The top should be delicately browned.

To prepare a soft custard, follow the procedure for mixing a baked custard, except cook it in a double boiler, stirring all the time. When the eggs coagulate (at 185°F), the mixture will coat a clean spoon dipped into the center. Quickly remove the custard from the heat. Pour it into a stainless steel bowl to cool. Do not use aluminum because it will cause the custard to develop a grayish cast. If a soft custard is overcooked, the texture can be improved by beating it.

FROZEN DESSERTS

Most frozen desserts prepared in food service are based on commercially made ice cream. A high quality ice cream should weigh a minimum of 4.5 lbs. per gallon. Ices and sherbets should weigh at least 6 lbs. per gallon. The quality of frozen desserts is directly related to the quality of the ice cream used to make them.

Ice cream must contain 8 to 10 percent butterfat according to federal regulations. Ice milks must contain 2 to 7 percent butterfat and have at least 11 percent milk solids.

To scoop easily, ice cream should be slightly soft (8-15°F.) If it is too hard, it is difficult to scoop. If it is too soft it melts too quickly.

Be sure to use the correct size scoop to ensure the desired number of portions per carton. Keep the scoop in a well of cold, running water between uses. Tap the dipper against a pad or paper towel before using it to remove excess water. Water will cause ice crystals to form in the ice cream.

Use a circular motion to fill the dipper. Release the ice cream into the serving container. Keep the ice cream level to maintain its texture and prevent the formation of ice crystals.

Garnishing and Serving Desserts

Sweet toppings and garnishes are used for desserts. Fresh fruits are naturally colorful and have a variety of shapes. Contrasting colors are often combined. They are often arranged in an attractive display. Fruit compotes are usually served in a tall clear glass dish to show off the fruit. Color may be added to light-colored cooked fruits by glazing with a colored sugar syrup. Fruit desserts may be served with whipped cream, ice cream, fruit sauce, or hard sauce.

Gelatin desserts are colorful and are often molded into attractive shapes. They need very little garnishing. Fruit gelatins may be served with whipped cream or soft custard. Gelatin creams may be garnished with fresh fruits to match their flavor. Gelatin whips may be garnished with a cherry or fresh strawberry. Gelatin souffles are usually elaborately garnished with chocolate shavings, whipped cream rosettes, or chopped nuts. Gelatin desserts are usually served in stemmed glassware or on clear glass plates.

Molded gelatin desserts must be unmolded before serving. To remove the gelatin from the mold, dip the mold briefly into very hot water. Place the serving dish on top of the mold. Quickly invert the mold and the serving dish. The molded dessert will easily slip out of the mold.

Puddings are often served with a fruit topping. Either fresh or canned fruit may be used. Whipped cream also adds eye appeal to puddings. Some puddings are topped with a meringue which is browned lightly before serving. A dessert sauce is often served over baked custards. Caramel or fruit sauce add flavor and color to custards. Souffles may be topped with whipped cream to make them even more elaborate. Puddings are usually chilled before serving.

Frozen desserts range from simple to elaborate. In fast food service, ice cream desserts are served on cones, in paper cups, or in plastic dishes. Attractive garnishes of whipped topping, cherries, chopped nuts, crushed pineapple, and dessert sauces are used creatively to give these desserts eye-appeal. In other types of food service, these desserts may be served in stemmed glassware or clear glass dishes.

Holding and Storing Desserts

Most desserts should be served either cold or warm. A few can be served either temperature.

Fresh and canned fruits served as desserts should be served cold. Stewed dried fruits may be served either hot or cold. Frozen fruits should be thawed, but should still have some ice crystals. Cooked fruits should be served warm as soon as possible after cooking.

Gelatin desserts are usually prepared the night before since they require at least four hours to set firmly. They should be covered in the refrigerator to prevent absorption of odors and tastes. Covering them also keeps the gelatin from drying out. Gelatin desserts should be kept refrigerated until serving time.

Puddings and custards should be removed from the heat and cooled immediately to prevent overcooking and curdling. Those containing eggs require careful storing and handling. The danger of food poisoning in such a mixture was discussed in Chapter 5. Staphylococcus bacteria grow very rapidly in milk-egg mixtures at lukewarm temperatures. Cool all puddings and custards rapidly in the refrigerator. Cover the surface to prevent a scum from forming. Stir occasionally while cooling. Keep refrigerated until serving time.

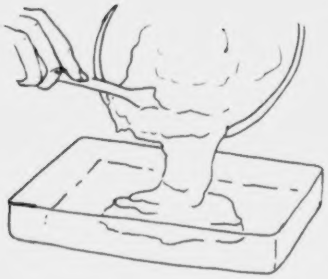
All frozen desserts must be kept frozen until serving time. For prolonged storage ice cream should be hard frozen at temperatures below 0°F. Ice cream needed for immediate service should be kept a little warmer–about 8-15°F. Frozen desserts should be kept tightly covered to prevent drying out. Ice cream that has been softened and refrozen shrinks and becomes denser. It will yield fewer servings.

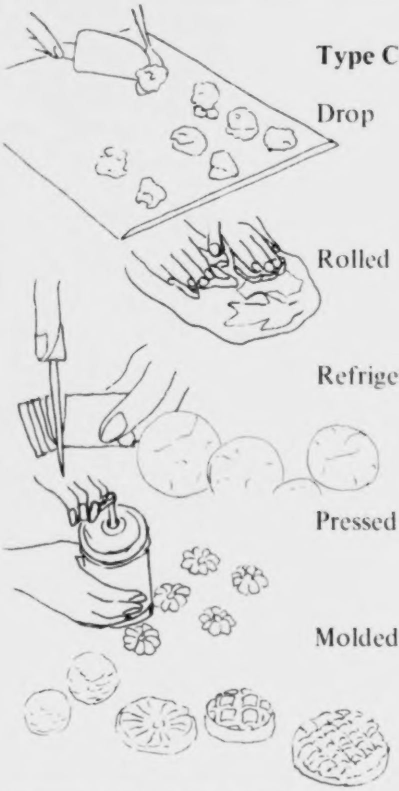
Types of Cookies

Cookies are small, sweet finger foods. Cookies have the same ingredients as cakes, but they have more fat and flour and less sugar. Cakes are made from batters, cookies are made from doughs. Very soft cookie doughs have the most eggs and sugar. Stiff cookie doughs have the least eggs and sugar. Semi-soft or drop cookie doughs have less shortening than other cookie doughs.

Cookies can be made in a variety of flavors, sizes, shapes, and forms. The chart below describes the main types of cookies, the type dough required, and how they are formed.

Type Cookie	Kind of Dough	How Cookie Is Formed
Bar	Very soft	Dough is spread in a pan and baked. After baking the cookies are cut into squares, rectangles, or triangles.





Type Cookie	Kind of Dough	How Cookie is Formed
Drop	Semi-soft	Dough is pushed from a scoop onto a baking sheet. Dough is spaced about 2 inches apart to allow for spreading.
Rolled	Stiff	Dough is rolled into a thin sheet and cut into various shapes with cookie cutters.
Refrigerator	Stiff	Dough is pressed with the hands into a long smooth roll and chilled before baking. The dough is sliced to form cookies.
Pressed	Rich, stiff	Dough is forced through a cookie press or pastry tube to form various shapes.
Molded	Stiff	A small amount of dough is shaped and molded with the fingers into the desired shape (crescent, rolls, balls, etc.)

Menu Uses of Cookies

Cookies may be served alone as a dessert or as an accompaniment to another dessert. Cookies are popular finger foods for receptions, teas, or parties. Cookies are popular desserts in school cafeterias. They are also popular bakery items. Cookies are often served with ice cream, sherbet, fruit, or puddings.

Cookies are often used as part of a dessert. They may serve as the base for the dessert. For example, ladyfingers may be placed around the edge of a gelatin mold. Brownies are sometimes served a la mode with a chocolate sauce.

Convenience Cookie Products

Many food service establishments purchase cookies from a bakery rather than prepare them from scratch. This saves time and energy in the kitchen.

Making Cookies

Cookies are easy to make. They include the same ingredients as quick breads and cakes and are mixed by the same methods.

INGREDIENTS

Cookies are made from flour, salt, leavener, sugar, shortening, eggs, and liquid. Cookies need less liquid and leavening and may need more fat than is used in quick breads and cakes. The ingredients in cookies serve the same purpose as those in quick breads and cakes.

The proportions of the ingredients vary with the type of cookie dough. A very soft dough has more eggs and sugar than other types of cookies. Stiff cookie dough has the least eggs and sugar, but the most shortening.

A high proportion of shortening is needed for a stiff dough. Because the shortening hardens when chilled, the dough becomes easier to handle. The shortening also makes it easier to press the dough through the cookie press without sticking.

Doughs with more eggs produce chewy cookies. Ones with fewer eggs produce crisp doughs with a high proportion of eggs to flour. Stiff doughs have the lowest proportion of eggs to flour. Milk may be added if more liquid is needed.

A high ratio of sugar to shortening produces a crisp cookie. Cookies made with molasses or honey are soft because of the added moisture.

The amount cookies spread during baking is affected by the type of leavener used and the amounts of sugar and shortening. Baking powder produces a thick cookie. Cookies with less sugar and shortening spread less than ones made with a rich dough. Using baking soda results in a thin dry cookie.

MIXING

Most cookies are mixed by one of two methods: the muffin method or the creaming method. The muffin method is used to make soft and semi-soft doughs. The creaming method is used for stiff doughs. The foam method is best for macaroons and other cookies which use eggs as the main leavener. The muffin method is described in Chapter 23, Breads. The creaming and foam methods are described in Chapter 35, Cakes and Icings.

PREPARING

Cookies made from soft or semi-soft dough require no special preparation for baking. Bar cookie dough is simply spread in a baking pan. Spreading the dough thin results in crisp cookies. Spreading it thick makes chewy ones. Drop cookies are dropped about 2 inches apart on a greased baking sheet using the appropriate size scoop. A No. 40 scoop makes a large cookie. A No. 60 scoop might be used if two cookies are used per serving. For a smaller, tea-size cookie, use a No. 100 scoop or the end of a teaspoon.

Stiff doughs must be refrigerated before they are prepared for baking. Chilling hardens the shortening and makes the dough easier to handle.

Dough for refrigerator cookies is formed into long rolls and wrapped in waxed paper before refrigerating. For added interest, chocolate and vanilla refrigerator doughs can be rolled together for pinwheel cookies. Strips of vanilla and chocolate dough can be braided together for spiral cookies. Checkerboard cookies can be made from four squares of dough, two of one color and two of another. The dough is stacked, alternating colors, and sliced. The slices are stacked to form a checkerboard pattern. A long sheet of contrasting dough is rolled and wrapped around the checkerboard. After chilling, refrigerator dough is sliced and placed on baking sheets. The slices may be thick or thin.

Dough for molded cookies is pressed through a cookie press or pastry bag onto a greased baking sheet. A variety of shapes can be formed.

Rolled cookie dough is rolled out on a lightly floured board or canvas liner. A ***canvas liner*** is a heavy canvas baking sheet used for rolling cookies and pastries. After rolling to a thickness of 1/8 inch, the dough is cut into the desired shapes with floured cookie cutters. The cookies are lifted with a spatula and placed about 1/2 inch apart on lightly greased baking sheets.

BAKING

The time and temperature required for baking cookies depends on the type dough and the size and thickness of the cookies. When the minimum baking time has elapsed, check the cookies for doneness. Bar cookies are baked at 325°F for about 30 minutes. Most drop cookies are at 375°F for 10-15 minutes until light brown. Rolled, pressed, and molded cookies are baked about 400°F for 8-10 minutes until lightly browned. Watch rolled cookies carefully while baking because they burn easily.

DECORATING

Decorated cookies are frequently made in small bakeries, but are only occasionally made in food service for special occasions.

Bar cookies may be sprinkled or rolled in powdered sugar while warm. Cool bar cookies may be iced with a thin layer of frosting, if desired.

Rolled cookies may be spread with an egg wash and sprinkled with chopped nuts, colored sugars, or candies. An ***egg wash*** is made by mixing egg white and water (1 tablespoon water per egg white). Rolled cookies may be brushed with a very light icing made of confectioners sugar and water. Flavoring and coloring may be added. While the icing is still soft, it may be decorated with colored sugars or candies. Rolled cookies should be cool before icing.

Serving Cookies

Cookies are served at room temperature. When served alone, two cookies can be slightly overlapped on a small plate. A small doily may be placed on the plate to make it look more attractive. Bar cookies may be served a la mode or with a sauce. As an accompaniment, the cookies may be placed beside a stemmed glass of fruit, pudding, or ice cream on a small, doily-lined plate.

For special occasions, several kinds of cookies may be arranged on glass trays. Sometimes a tier of trays is used. The shapes and colors of cookies may be varied or each tray may contain one kind of cookie.

Holding and Storing Cookies

Cookies should be cooled on a cake rack. Bar cookies must be cut properly to achieve the desired yield. A 12 X 20 inch pan yields 48 2 X 2 1/2 inch bars by making 6 cuts the length of the pan and 8 across. An 18 X 26 inch pan may be cut to yield 60 3 1/2 X 2 inch, 96 2 X 2 inch, or 128 1 X 3 inch cookies. Cookies should be cool before they are decorated or stored.

Most cookie doughs can be made in large amounts. The cookies may be stored in the refrigerator or freezer and used as needed. Dry cookies may be stored in covered containers. Soft, moist cookies should be placed in containers in single layers.

The crispness of cookies can be restored by placing them in the oven briefly before serving. Use an oven temperature of 225°F and heat for about 5 minutes.

Points To Remember

- Desserts come in many varieties. They may be classified as cookies, cakes, pastries, pies, fruit desserts, gelatin desserts, milk desserts, and frozen desserts.
- Fruit desserts may include fresh fruits, canned fruits, frozen fruits, or dried fruits. They may be served alone or as an ingredient. Cooked fruit desserts are usually baked or fried.
- Gelatin desserts range from fruit flavored gelatin squares to elaborate souffles. Gelatin desserts also include whips, sponges or snows, creams, and mousses.
- Milk desserts include puddings, custards, and baked souffles. Puddings are thickened with a starch ingredient such as cornstarch, tapioca, or rice. Custards are thickened with eggs. A baked custard is baked in the oven until it sets or gels. A soft custard is simmered over hot water or stirred constantly over low heat.

- Frozen desserts include ices, sherbets, ice creams, ice milks, and specialty frozen desserts including these products. Ices are made from sweetened fruit juices. Sherbets are made with sweetened fruit juices and milk. Ice creams are made from cream, milk, and sugar. Ice milks are made of the same ingredients as ice creams, but contain less fat.

- Convenience products are available for most types of desserts. Processed fruits include canned, dried, and frozen products. Mixes are available for puddings, custards, pie fillings, and gelatin. Most food service operations buy commercially frozen ice cream, ice milk, ices, and sherbets.

- Fruit desserts are among the easiest to prepare. For fruit desserts that are cooked, baking is the cooking method used most frequently.

- Flavored gelatins are dissolved in boiling hot water. The remaining water is added cold or in the form of shaved ice for a quick set. Gelatins are whipped, or other ingredients are added, when the gelatin is partially set. Gelatin desserts should be refrigerated until set and they should be prepared at least four hours before being served.

- Milk desserts include puddings and custards. Puddings are thickened by cornstarch, tapioca, rice, or bread. Eggs provide some of the thickening in pudding. Custards are thickened entirely by eggs.

- Puddings and custards may be baked or prepared on the range top at low temperatures.

- Most frozen desserts prepared in food service are based on commercially made ice cream. To scoop easily, ice cream should be at 8-15°F.

- Sweet toppings and garnishes are used for many desserts.

- Gelatin desserts require at least four hours to set firmly.

- Puddings and custards should be removed from the heat and cooled immediately to prevent overcooking, curdling, and food poisoning.

- Cookies have the same ingredients as cakes but they have more fat and flour and less sugar. The types of cookies are bar, drop, rolled, refrigerator, pressed, and molded. They may be served alone as a dessert or as an accompaniment to another dessert.

- Depending on the type of cookie, cookie dough may be very soft, semi-soft, or stiff. Stiff dough must be refrigerated to harden the shortening before the dough is prepared for baking.

- Cookies should be cool before they are decorated or stored. Cookies should be stored in covered containers.

Words To Know

a la mode
baked Alaska
baked custard
baked souffle
Bavarian cream
Bettys
canvas liner
charlotte
cobblers
crisps
custards
dumplings
egg wash
flan
floating island
fruit compote
fruit fritters
fruit turnovers
fruit whips
gelatin creams
gelatin whips
ice cream pies
ice cream soda
ice creams
ice milks
ices
mousse
parfait
Peach melba
puddings
scalded
sherbets
shortcakes
simple syrup
snows
soft custard
Spanish cream
sponges
sundae
trifle

Questions For Review

1. Name and describe six types of fruit desserts.
2. Briefly describe each of the following gelatin desserts:
   a. gelatin whips
   b. sponges or snows
   c. gelatin creams
   d. Bavarian cream
   e. mousse
3. What is the difference in a pudding and a custard?
4. What is the difference in a baked custard and a soft custard?
5. Explain the differences in ices, sherbets, ice creams, and ice milks.
6. Name and describe four desserts made with ice cream or sherbet.
7. What convenience dessert products are available to food service establishments?
8. Explain how to prepare baked apples.
9. Explain how to make a gelatin dessert using flavored gelatin and fresh fruits.
10. Explain how to make pudding on top of the range.
11. Explain how to make baked custard. What is the test for doneness?
12. What are some appropriate garnishes for puddings?

[redacted]

13. How should gelatin desserts be stored until serving time?
14. What ingredients are used in cookies?
15. Explain the differences in preparation of the following types of cookies:
    a. bar
    b. drop
    c. refrigerator
    d. pressed
16. Describe simple procedures for decorating and serving cookies.
17. Describe appropriate techniques for cooking, holding, and storing cookies.

25

Chapter Twenty-five Cakes and Icings

COMPETENCIES TO DEVELOP

- Make cookies, cakes, pies, pastries, and meringues.
- Prepare and use icings, frostings, and fillings.

OBJECTIVES TO ACHIEVE

- Identify the types of cakes and their characteristics.
- Describe menu uses of cakes.
- Describe convenience cake products.
- Describe procedures for preparing cakes.
- Summarize procedures for cooling and storing cakes.
- Identify the types of icings, frostings, and fillings.
- Describe procedures for preparing icings, frostings, and fillings.
- Describe techniques for decorating cakes.
- Describe procedures for cutting and serving cakes.

Cakes are moist, tender, sweet, baked desserts. They are among the most popular desserts on food service menus. Many different kinds of cakes are possible by varying their basic ingredients. Different flavorings may be added for variety. Cakes may be baked in different shapes—round, square, rectangle, or tube. Cakes may consist of one layer or several layers. They may be dusted with powdered sugar, covered with a sauce, filled, or frosted. A variety of icings may be used. Icings may be different colors and flavorings. Iced cakes can also be decorated with candies, nuts, coconut, or fruit.

Types of Cakes

Cakes are classified by their ingredients. Those with shortening and chemical leaveners are called ***shortened***. Those which use eggs as leaveners usually do not contain shortening. They are called ***foam cakes***. These cakes differ in appearance, texture, and flavor.

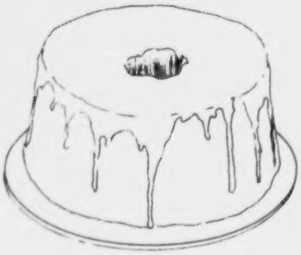
SHORTENED CAKES

Because the first cakes were made with butter, shortened cakes are often called ***butter cakes***. Today shortening and margarine have widely replaced the use of butter in cakes. All shortened cakes have the same basic ingredients–cake flour, sugar, leavener, flavoring, shortening, eggs, and milk.

These basic ingredients are varied to make different kinds of shortened cakes. Shortened cakes may be yellow or white. The yellow color is achieved by the use of additional egg yolks. A white cake results when only the whites of eggs and white shortening are used. Shortened cakes may be flavored with chocolate, spices, lemon, or orange.

FOAM CAKES

Angel food, sponge, and chiffon cakes are types of foam cakes. All of these cakes use an ***egg foam***, or beaten eggs, for leavening. In addition to the egg foam, sponge and chiffon cakes include baking powder for additional leavening.



Angel food cakes are very white because only the egg whites are used. Angel food cakes are flavored with vanilla or almond flavoring. ***Sponge cakes*** are golden yellow because they contain a large quantity of egg yolks. Sponge cakes are flavored with either vanilla or lemon extract. ***Chiffon cakes*** are light textured, tender, and moist. Many different variations of chiffon cakes may be made by adding chocolate, fruits, nuts, and different flavorings.

Menu Uses of Cakes

Cakes are a traditional favorite for desserts, snacks, and special occasions like birthdays and weddings. Some cakes such as jam cakes and fruit cakes are associated with holidays like Christmas.

Convenience Cake Products

Many food service establishments purchase commercially baked cakes. These cakes may be either fresh or frozen.

Cakes from prepared cake mixes can be made with fewer and less-skilled employees than cakes prepared "from scratch." Carefully selected mixes can be used to produce consistently high quality products. Most mixes contain all the necessary ingredients except water. Some also require fresh eggs. The best results are achieved by following the package's directions carefully.

A master cake mix can be prepared in the food service kitchen by combining the dry ingredients, including dry milk, and cutting in the fat. Liquid ingredients and flavorings are added before baking. Variations can be achieved by using different spices and flavorings.

Preparing Cakes

Cakes are very delicate. Their quality depends on carefully measuring or weighing the ingredients in the correct proportions. Even small variations in the ingredients can affect the quality of the cake.

Standardized cake recipes are sometimes called ***formulas***. Like scientific formulas, recipes ensure that the same results will be achieved each time they are used; following the recipe accurately accurately will result in a perfect cake every time.

INGREDIENTS

High-quality ingredients are needed to produce high-quality cakes. All cakes contain flour, sugar, salt, eggs, leavening, and flavoring. Many also contain shortening and liquid. For best results, all ingredients for cakes should be at room temperature when the cake is mixed. The ingredients for cakes are usually weighed. Accurate scales are essential.

Flour

Cakes are usually made with cake flour. Cake flour has a lower gluten content than all-purpose flour. It produces larger, more velvety, more delicate cakes than all-purpose flour. Cake flour blends easily with shortening. Batters made with cake flour are more stable or resistant to curdling. They are not as sensitive to overmixing or undermixing. Excessive mixing will overdevelop the gluten structure and cause toughness.

Accuracy in measuring the flour affects the quality of the cake. Too much flour results in a tough cake that cracks during baking. Too little flour may cause the cake to fall.

Sugar

A fine sugar, such as ultra fine or baker's special, creams with shortening more easily than regular granulated sugar. It produces a cake with more volume than regular granulated sugar. Brown sugar is sometimes used for part of the sugar in cakes for added flavor.

Careful measurement of the sugar is important. Too much sugar can weaken the gluten structure. The result is a heavy, coarse-textured cake that may fall. It also causes the crust to become dark. Too little sugar results in a tough cake. It also reduces the shelf life of the cake.

Shortening

Butter, margarine, or shortening are the fats usually used in cakes. Shortening produces a lighter cake than butter. Butter gives the best flavor, but is expensive. A ***high-ratio shortening***, developed especially for cakes, can be creamed to the highest volume. It produces a sweeter, more tender, and more finely grained cake than butter or margarine. In addition, the cake will have a longer shelf life. Artificial butter color and flavor make cakes made with shortening taste more buttery. Chiffon cakes are made with oil.

Shortening improves the texture, tenderness, and keeping quality of cakes. The amount of shortening must be in correct proportion to the sugar and flour. Too much shortening weakens the gluten structure and will cause a cake to fall. Too little will cause a cake to be tough and have a poor shelf life.

Eggs

In food service, liquid eggs are preferred. However, fresh eggs in the shell, frozen eggs, or dried eggs may also be used. Eggs improve the color and the texture of the cake. Eggs provide the leavening in sponge cakes. Using too few eggs will result in a cake of reduced volume, coarse texture, and poor shelf life.

Leavener

The leavener causes the cake to rise and become light and porous. Shortened cakes use chemical leaveners. Baking powder is most often used. Baking soda is used with an acid like buttermilk to leaven some cakes. Sponge cakes use eggs for all or part of the leavening. The leavening action is produced by the air and steam from the beaten eggs.

Only a small amount of leavener is needed. Too much results in a coarse, uneven grained cake of poor quality and flavor. Too little leavener results in a flat, dense cake.

Liquid

The liquid provides the moisture needed to develop the gluten. It also works with chemical leaveners to produce carbon dioxide. The liquid used in cakes is usually milk. Fresh, canned or dried milk may be used. In food service, dried milk is often used because it requires no refrigeration. The liquid in a cake must be carefully measured. Too much results in a heavy, soggy cake. Too little causes the cake to be tough.

MIXING

The way the ingredients are combined is important to the success of the cake. Deviating from the prescribed mixing method may result in a cake that is coarse, heavy-textured, sugary, or sticky. The method of mixing depends on the type of cake.

Two methods are used for mixing shortened cakes–the creaming method or the blending method. The method used depends on the proportions of ingredients in the recipe. Use the method described in the recipe.

Creaming Method

The ***creaming*** or ***conventional method*** produces a light, fine-textured cake. To make a cake using this method, first cream the softened fat and sugar. Beat the eggs into the creamed mixture until thoroughly blended. Sift the dry ingredients together and add alternately with the milk to the creamed mixture, beginning and ending with the dry ingredients. Mix until well blended, scraping the bowl down at least once.

Blending Method

The ***blending method*** is the one most frequently used in food service. It produces a rich, sweet cake. It takes less time than the creaming method. To make a cake using the blending method, sift the dry ingredients together in the mixing bowl. Add the shortening and blend with the dry ingredients. Mix the eggs, milk, and flavoring. Add half to the flour-shortening mixture. Blend, then scrape the bowl. Add the remaining liquid and blend, scraping the bowl as needed.

When the food service uses its own master mix, the blending method is used. The dry ingredients and shortening are combined to make the master mix. The mix is stored in tightly covered containers. The remaining steps in the blending method, addition of the liquid and eggs, are completed before the cake is baked.

Mixing Foam Cakes

The mixing methods for foam cakes are different from the ones used for shortened cakes. Beating the eggs to incorporate air is part of the mixing method for each type of foam cake.

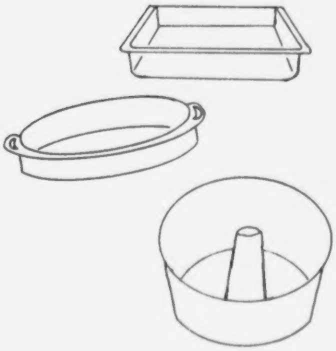
Angel Food Cakes. The success of an angel food cake depends on using the correct mixing methods. In the preferred method, half of the sugar is sifted together with the flour four times. The egg whites are beaten until frothy. Cream of tartar and salt are added and the egg whites are beaten until stiff. The remaining half of the sugar is gradually beaten into the egg whites and the flavorings are blended in. The flour-sugar mixture is folded into the egg whites by hand until the flour disappears. Be careful not to overmix. Overmixing causes the cake to be tough.

High quality angel food cakes are difficult and time-consuming to make. Many food service establishments buy commercially made angel food cakes or use a mix. The mixes contain dried egg whites. Because dried egg whites make a more stable foam, the danger of overmixing is much less. However, the package directions must be followed exactly for best results.

Sponge Cakes. The preferred method for mixing sponge cakes produces a fine-grained, sweet cake. To mix a sponge cake beat the eggs, then beat the sifted sugar into the eggs. Melt the margarine in the heated milk. Sift the flour, baking powder, and salt together twice. Add the dry ingredients alternately with the milk to the egg mixture, beginning and ending with the dry ingredients.

Chiffon Cakes. Chiffon cakes are different from other foam cakes because they contain oil. Adding the ingredients in the proper order are keys to successfully mixing chiffon cakes. First, the flour, half of the sugar, the baking powder, and salt are sifted into the mixing bowl. A depression is made in the center of the flour. In order, add the oil, egg yolks, water, and flavoring, mixing until just blended. In a clean bowl, the egg whites and cream of tartar are beaten on high until soft peaks are formed. The remaining half of the sugar is gradually beaten into the egg whites until stiff peaks are formed. The flour-liquid mixture is poured into the egg mixture and folded until blended.

PANNING



Quantity cake recipes have been developed for different pan sizes. For best results, use the pan size and shape indicated in the recipe. If the pan is too large, the cake will not brown properly. If it is too small, the cake batter will overflow the pan as it rises. Scale the cake batter to fit the capacity of the pan. Shortened cakes are usually baked in oblong pans for single layers or round pans for multiple-layers. Most foam cakes are baked in tube pans. Sponge cakes may also be baked in oblong pans.

Preparing the Pans

Pans for shortened cakes and sponge cakes should be greased on the bottom and sides or lined with silicone-treated paper. Pans for angel food and chiffon cakes are left ungreased.

To grease cake pans, use a commercially prepared pan grease, or prepare a pan grease using one portion of shortening, one of oil, and one-half portion of flour.

Filling the Pans

Thin shortened cake batters will spread evenly to the corners of the pan. Thick shortened cake batters should be spread evenly with a spatula or the hand. After filling the pan, rap it sharply on the work surface to eliminate any air bubbles.

Pour foam cake batters into the pan carefully, turning the pan to even the batter. Cut through the batter with a knife or spatula to expel any air bubbles.

BAKING

Cakes should be baked as soon as possible after mixing. Baking at the correct temperature for the correct amount of time is essential for a quality product.

Temperature

Because temperature is critical to the cake's quality, the oven should always be preheated. Most cakes are baked at 375°F. Thin cakes may be baked at a higher temperature to evaporate the liquid. Large, thick cakes may be baked at a lower temperature to ensure even doneness inside and outside. Chocolate cakes may be baked at a lower temperature to keep the chocolate from burning. Foam cakes may be baked at a much lower temperature. The recipe will indicate the preferred temperature.

In a conventional oven, the placement of the cake pans affects the circulation of air in the oven. Air circulation affects the distribution of heat in the oven. Uneven heat distribution will affect the quality of the cake. Place cake pans on a rack about one-third from the bottom of the oven. If only one pan is used, place it in the center of the rack. Arrange layer cake pans so they do not touch one another or the sides of the oven. This allows the oven heat to circulate freely around the pans. When using two racks, stagger the position of the pans. Avoid placing one pan directly above another. In carousel-type ovens and convection ovens placement of the cake pan does not affect the air circulation.

If the temperature is too low, the cake will be flat because it cannot rise properly. Instead of being brown, it will be pale and have a sticky crust. If the temperature is too high, the cake will brown before it finishes rising. The crust will be tough, cracked, and dark brown. The cake will have a dense texture.

Timing

Cake recipes give the approximate baking time. The exact baking time will depend upon the oven temperature, the size of the pan, and the thickness of the batter. Do not open the oven during the first half of the baking time when the cake is rising. Doing so may cause the cake to fall.

As the end of the baking time nears, check the cake for doneness. If the cake is done, the crust will be golden brown. If the cake is made with fat, it should have shrunk away from the sides of the pan. A toothpick or wire tester inserted into the middle of the cake will come out clean. The cake will spring back when touched lightly with the finger. Be careful not to overbake the cake. Overbaking results in a dry cake.

COOLING AND STORAGE

When cakes are removed from the oven, they must be handled carefully to prevent them from breaking apart.

Shortened cakes should be cooled slightly in the pan on a rack. This allows the cake to become firm. Shortened cakes should be removed from the pan while they are still warm to keep the bottom from becoming soggy. To remove the cake from the pan, run a spatula or knife around the edges to loosen the cake. Turn the cake out on a rack. Remove the silicone liner if used. Turn the cake right-side-up on another rack. Allow the cake to cool completely before storing or icing.

Foam cakes should be cooled upside down in the pan on a rack. Turn the legs on the tube pan down to raise the pan while the cake cools. Allow the cake to cool completely before removing it from the pan. Removing it before completely cool may cause the cake to collapse or break apart.

After cooling, cakes may be filled or frosted. Cakes which will not be used immediately should be wrapped in moisture-proof wrappings before storing in the refrigerator or freezer. Cakes will keep several days in the refrigerator or several weeks in the freezer. Unrefrigerated cakes mold quickly, especially during hot, humid weather.

Frosting, Icings, and Fillings

Frostings, icings, and fillings add to the flavor and appearance of cakes. They also add moisture and prevent cakes from drying out. Frostings and icings are made from the same ingredients, a mixture of sugar, liquid, and flavoring. ***Frosting*** is thick, fluffy, and spreadable. ***Icing*** is thin and pourable.

Cake ***fillings*** are sweet, moist, spreadable mixtures. Fillings are spread between the layers of cake to hold the layers together. The frosting used on the outside of the cake may be used as the filling too. The filling may be a cream filling like that used in pies. Jam or jelly may be used to fill cakes. Some fillings are mixtures containing nuts and dried fruits.

TYPES OF FROSTINGS AND ICINGS

Frostings and icings may be either cooked or uncooked. Both require the very best ingredients to produce a quality product.

Uncooked

Uncooked icings and frostings are mixtures of powdered (confectioners) sugar. They are easy to make because they require no cooking.

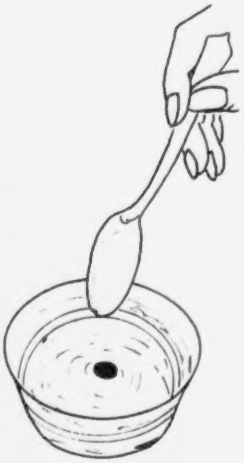
Uncooked Icings. Uncooked icing may be called ***simple, flat***, or ***plain water icing***. It is a thin, pourable mixture of powdered sugar, liquid, and flavoring. A small amount of shortening may be added to prevent the icing from drying out and improve its keeping quality. Uncooked icing may be spread with a brush or poured. A simple icing is mixed by gradually adding the powdered sugar to the liquid and flavoring and blending until smooth. A warm simple icing may be brushed on coffee cake, Danish pastries, sweetrolls, sponge cake, or angel food cake. It may be poured on top of the cake and allowed to run down the sides.

Creamed Frostings. A ***creamed frosting*** is the most popular type of frosting. It stays soft longer than simple icing because it contains shortening. Beating the shortening gives the frosting a smooth, fluffy texture. It is easy to make, easy to use for decorating, and keeps well.

Creamed frosting is made with shortening, powdered sugar, and flavoring. These ingredients are creamed together. Creamed frosting may contain either cream and salt or cornstarch and milk. If cream is used, it is added to the creamed mixture and beaten until light and fluffy. If cornstarch and milk are used, they are cooked until thick, cooled, then added to the creamed mixture. Vanilla, chocolate, cocoa, coffee, or other flavorings may be added for variety.

Decorator's Frosting. ***Decorator's frosting***, or ***Royal Icing***, is made with egg whites, shortening, and powdered sugar. It is smooth and stiff and can easily be molded into flowers, leaves, and other shapes. It becomes very hard and brittle when dry. Decorator's frosting must be beaten before each use. If it becomes too stiff, it may be thinned with water or egg whites.

Cooked



Cooked icings are much more difficult to make than uncooked ones. Making cooked icings involves dissolving large amounts of sugar in a hot liquid and cooking the syrup to a specified temperature or stage. Using a candy thermometer is the most accurate way to be sure the syrup has reached the correct temperature. Several tests may also be used.

Test	Temperature	Description
Thread	230-234°F	When dropped from a spoon, the syrup spins a 2-inch thread.
Soft ball	234-240°F	When dropped in very cold water, the syrup forms a soft ball that flattens when removed from the water.

If crystals form on the sides of the pan during cooking, they should be removed. If they are not removed, the crystals will cause other crystals to form. The formation of crystals can be prevented by covering the syrup while bringing it to a boil.

Corn syrup, cream of tartar, or vinegar may be cooked with the sugar and liquid to regulate the size of crystals formed. A small amount will contribute to a smooth product. Too much will keep the frosting from hardening.

When the syrup reaches the specified temperature, it should be cooled without stirring. Stirring causes large crystals to form in the syrup. Beating cooled syrup causes small crystals to form, resulting in a smoother product. Syrups cooked to the soft ball stage are used to make fondant and boiled frostings.

Fondant. ***Fondant*** (FAHN-dunt) is a pure white icing made from a sugar-water mixture boiled with cream of tartar. The syrup is cooled, then beaten until it is stiff and white. Finally, it is kneaded by hand until smooth. When exposed to air, fondant hardens. Commercial fondant is available in 40-lb. cans.

Fondant may be used alone as an icing or as a base for many frostings. Fudge frosting is made by combining fondant, butter, melted chocolate, and evaporated milk. The mixture is beaten until the frosting is smooth, creamy, and fluffy. The frosting should stand in soft peaks. It will not become hard or brittle.

If the fondant is cooked too long, the frosting becomes hard and sugary. When it is not cooked long enough, the frosting remains too soft.

Boiled Frosting. In food service most ***boiled frostings*** are made from a commercial fondant base. If made from scratch, hot fondant is beaten into beaten or unbeaten egg whites. The beating continues until the frosting stands in peaks. If the egg whites are beaten until stiff before the syrup is added, the frosting will harden immediately after spreading on the cake. This type frosting is difficult to make and to use. If the syrup is added before the egg whites are beaten stiff, the frosting will harden slowly, allowing more time to spread it on the cake. If the frosting is beaten too long, it will become grainy and brittle.

Glaze. A ***glaze*** is a thin sweet syrup or sauce used as a coating. It may be cooked in a sauce pan or under the broiler to the desired consistency.

Coloring

The food colorings used in icings and frostings are available in liquid and paste forms. Many colors are available. It is best to add a small amount of color at a time until the desired color is reached. Dark colors should be mixed one or two hours before using to allow them to reach their true color. Mix enough of one color to complete the cake.

FROSTING CAKES

Before frosting, the cake is prepared by trimming and leveling it. Remove all loose crumbs from the cake. Place layer and tube cakes on a ***decorator's wheel***, or turntable, to make all sides of the cake accessible. Use a spatula to spread the frosting.

Sheet Cakes

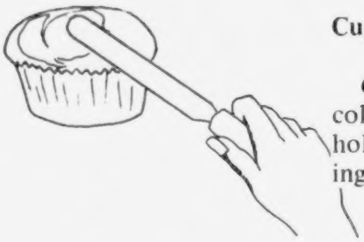
Sheet cakes are baked in large, shallow baking pans. Often the sheet cake is left in the pan and only the top is frosted. Powdered confectioner's sugar can be used instead of sugar. To make an attractive design, place a paper doily on top of the cake, sprinkle the powdered sugar over it then remove the doily. If the cake is removed from the pan, the sides are frosted too. Frost the sides, then the top.

Loaf Cakes

Loaf cakes can be served frosted or unfrosted. Loaf cakes may also be sliced lengthwise and frosted like a layer cake. They may be sprinkled with powdered sugar instead of being frosted.

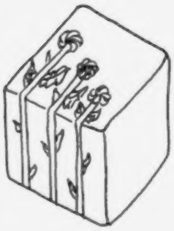
Cake Rolls

To make a cake roll, sponge cake is baked in a shallow sheet pan. The cake is turned out on a clean towel spread with powdered sugar. The lining paper, if used, should be removed. The cake is rolled loosely in the towel. When the cake is cool, it is unrolled and spread with jelly, jam, ice cream, or custard. The cake is then rerolled and sprinkled with powdered sugar or frosted.



Cupcakes

Cupcakes are small single-serving cakes. They are usually baked in colorful paper holders. They may be served plain or frosted. To frost, hold one cupcake in each hand and dip it or twirl it in a bowl of frosting or swirl the frosting by using a spatula.



Petit Fours

Petit (PET-e) fours are small iced cakes. The cakes may be made in diamond, square, or rectangular shapes. They are usually white cake. They may be filled with a sweet filling. The cakes are covered with almond paste and dipped in icing. They are quite time consuming to make. Most food services purchase them from a bakery.

Layer Cakes

Layer cakes may be filled or frosted between layers. To frost a layer cake, place the first layer top down. Spread the filling or frosting evenly to the edges. Place the second layer on top of the first, right side up. If more than two layers are used, trim the rounded top of each middle layer flat as needed. Fill or frost the top of each middle layer. Place the top layer on the cake, bottom side down.

The outside of the cake may be iced with a simple icing and chilled until the icing is hard before frosting. Icing the cake first makes it easier to frost.

Frost the sides of the cake first, working from the bottom to the top then frost the top. If a smooth frosting is desired, use a spatula dipped in warm water. A special tool may be used to create ridges around the sides of the cake. A fluffy icing is usually swirled with the spatula.

Tube Cakes

Tube cakes may be served plain, iced, or frosted. The top of a tube cake may be sprinkled with powdered sugar. An icing or glaze is often drizzled over the top of the tube cake and allowed to run down the sides. Sometimes foam cakes are hollowed out leaving one-inch cake walls and base. The cavity may be filled with a fruit or pudding filling. The cake may be frosted with whipped cream. The tube cake may be sliced around and frosted like a layer cake.

Foam cakes are usually baked in tube cake pans. Foam cakes require a lighter icing than other cakes. A light icing will not overwhelm the foam cake's delicate texture. Because it has a heavier texture, a chiffon cake may also have a butter cream frosting.

Tube cakes may be frosted only on the top, on the sides only, or all over. When only the sides are frosted, a ridge may be formed at the top so the cake may be topped with fresh or glazed fruit.

Decorating Cakes

Decorating cakes is an art. By using a few special tools and basic icings and frostings an endless array of designs can be created.

TOOLS

Cake decorating is done with a few specialized tools. A decorating bag, decorating tips, and a flower nail can be used to create many different designs.

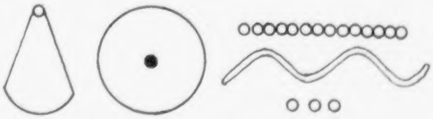
A ***decorating bag*** of cloth, plastic, or parchment is used to hold the decorator's frosting. Parchment bags are best when several colors of frosting are used. Paper bags may be purchased pre-cut or made easily from a triangle of paper. The point of the paper cone can be cut for use in making rose buds and leaves. The pastry bag may also be used with a variety of decorating tips.

To use the decorating bag, fill it with decorator's frosting. Twist the top to close. Grip the bag close to the top with the twisted end between your thumb and fingers. Position the bag perpendicular to the cake surface (about a 90-degree angle) or at a slant to the surface (about a 45-degree angle).

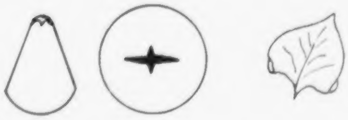
Squeeze the icing from the bag as you move it rhythmically to form the desired decoration. If too much pressure is used, the decoration will look wavy or wobbly. If too little pressure is used, the flow of icing will break.

Decorate from left to right if you are right-handed, right to left if you are left-handed. All letters and piping should be formed in the direction you usually write. Practice is required to learn the technique which works best for you. Practice on a practice board or the back of a baking sheet.

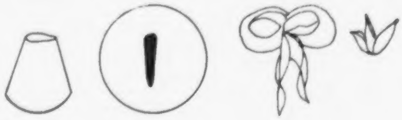
Decorating tips are metal, cone-shaped tubes with a shaped point. The tips are available in a variety of designs and sizes. Commonly used decorating tubes include:



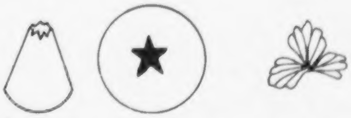
PLAIN OR ROUND TUBE
The opening is smooth and round. Use for lettering, dots, stems, stringwork, and piping.



LEAF TUBE
The opening is V-shaped. Use for long, thin, ruffled, serrated, fern, stand-up, or plain leaves.

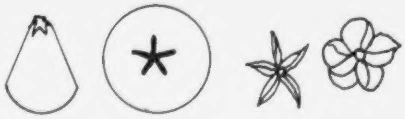


PETAL OR ROSE TUBE
The opening is a long slit that is very narrow at one end, wide at the other. Use for various types of flowers, streamers, and bows.

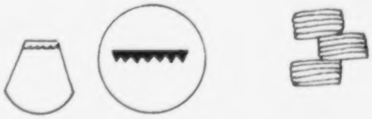


STAR TUBE
The opening is star-shaped. Use for stars, shells, rosettes, zigzags, scrolls, and fleur-de-lis designs.

DROP FLOWER TUBE
The openings look like a flower. The number of openings is the number of petals each flower will have. Use for swirl flowers and star flowers.



BASKET WEAVE TUBE
The opening is long with a smooth side and ribbed side. Use for making a basket weave design.



Flower or icing nails are made of plastic or metal, and are used when making individual flowers. The nail is turned as the petals of the flower are made on foil or wax paper placed on the wide surface of the nail. The surface of the nail may be flat, round, or concave depending on the depth of the flower desired.

PIPING

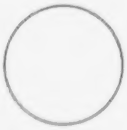
Piping is the technique of squeezing icing through the tube of a decorating bag to make borders, flowers, lettering, and other cake decorations. Piping designs range from the simplest to the most intricate. As a beginning cake decorator, practice piping the more complex designs on a practice board or on the back of a cookie sheet before piping the design on a cake.

The piping of figures, birds, and scenes is also a popular cake decorating technique. One method is to use the decorating bag to squeeze out a simple stick outline drawing on the cake surface. The various areas of the drawing are then built up or filled in with icing.

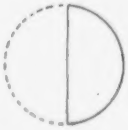
Another method for piping figures and scenes is to draw a pattern on greaseproof paper. Cover the pattern with thin wax paper that you can see through. Use the decorating bag to trace the outline of the pattern on the wax paper and then fill in the design. Let the decoration dry, carefully remove the decorations from the wax paper, and place in the correct position on the cake.

As your skills in cake decorating increase, you will want to try more intricate piping methods. It takes time and thought to plan the piping for the more complex designs. Plan piping designs on greaseproof paper cut the same size as the top of the cake. The pattern cut from the paper can be folded, cut, and put together in various ways to aid in planning a design. The following illustration demonstrates one method of using a grease-proof paper pattern cut the size of a round cake.

Cut the greaseproof paper pattern the size of the cake surface.



Fold the pattern in half.



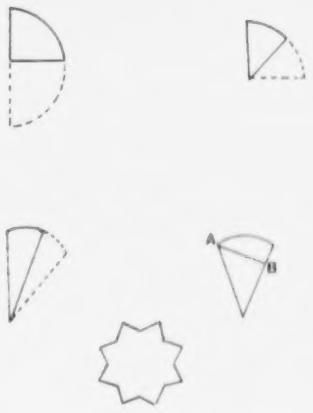
Fold the pattern in half again. (Will be 1/4 size)

Fold the pattern in half again. (Will be 1/8 size)

Fold the pattern in half again. (Will be 1/16 size)

Mark a dot at A, which will be at one one corner of the curved edge. Draw a straight line from A to the side of the triangle which is illustrated as B. Cut along the line you have just drawn.

Unfold, and the piping pattern design will have eight points.



The same procedures can be used for other cake surfaces. A square cake surface is illustrated:

Cut the greaseproof paper pattern the size of the cake surface.

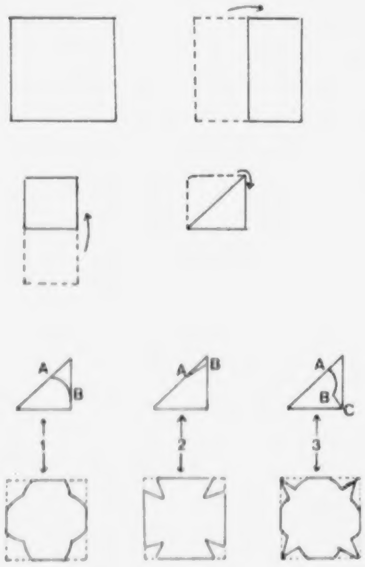
Fold the pattern in half.

Fold the pattern in half again. (Will be 1/4 size)

Fold the pattern in half again to form triangle. Keep point even. (Will be 1/8 size)

Mark with a pencil a line to cut on to achieve the desired pattern. Illustrations 1 and 2 show designs from two different markings–simple curve and angle marking.

The pattern for the piping design shown in Illustration 3 was folded into eighths and the line for cutting was drawn with a curve and an angle.



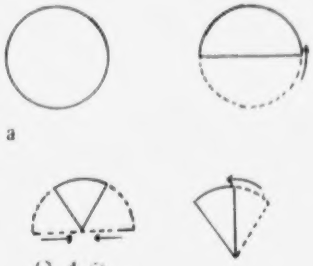
Experiment by changing the number of folds in your pattern. For example, to make a six-point piping pattern

Cut a greaseproof paper pattern the size of cake surface.

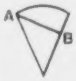
Fold the pattern in half.

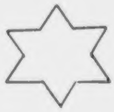
Fold into thirds from center to form a triangle.

Fold in half again.



Mark cutting line from A to B and cut.





Unfold, and piping design pattern will have six points.

Different folds, various angles, curves (both convex and concave), deep cuts, and combining patterns will give you an endless variety of piping designs. Remember that square designs can be used on round cakes, and vice versa.

When you have decided on the paper pattern you want to use for a piping design, make a cardboard pattern. Place the paper pattern on cardboard, outline the pattern, and cut out the design. Cut slanted notches in the edge of the pattern, bend up the small section between notches. (See Figure 1.) This will act as a handle in lifting the cardboard pattern from the cake surface.

To use the cardboard pattern, place it in the correct position on the cake and pipe around the pattern with icing. If the icing is close to the color of the surface to be decorated, it is easier to correct mistakes. Lift the piping mistake with a knife and repipe the design. When you have piped around the pattern, carefully remove the cardboard pattern. Using the appropriate color of icing, add other lines and details freehand over the piping outline.

MOLDING AND MODELING

Molding and modeling decorations add another dimension to cake decorating and are done with either pastillage or marzipan. As with other cake decorating techniques, it will take practice and patience to become skilled at molding and modeling cake decorations.

Pastillage

Pastillage is a gum paste used for making flowers, candies, and other fancy decorative pieces. Recipes for pastillage vary, but the basic ingredients include gelatin, water, and confectioner's sugar.

Your hands, the surface you are working on, the rolling pin, and any models you are using must be dusted with cornstarch. Use only a small piece of the gum paste and work with your hands till it is smooth. Keep the rest of the gum paste covered to prevent it from drying out. When the gum paste you are working with is smooth, roll it out with a rolling pin. Place a pattern on the gum paste and cut around it with a sharp knife. Let the piece dry. If you are using a mold, the smooth gum paste is pushed lightly into a mold, removed, and placed to dry.

Let the pieces dry on a clean, hard surface, like glass, at room temperature. When the pieces are almost dry on the top side, turn so they can continue to dry. When completely dry arrange the pieces on the cake surface in the planned design.

Marzipan

Marzipan is an almond paste used as a foundation for royal icing in wedding cakes and birthday cakes. Marzipan is used also for molding miniature flowers, fruits, and other decorative pieces for cakes, cookies, petits fours, and other baked goods.

Marzipan, a mixture of ground almonds, egg whites, icing sugar, and flavoring, should have a stiff consistency. If too soft, it will be hard to handle.

Color the marzipan with food coloring, adding a tiny bit at a time. Knead to work the color in. Avoid over-kneading marzipan, as it will become greasy. Keep marzipan covered when not in use to prevent it from drying out.

To mold flowers, miniature fruits, or other shapes, roll some of the marzipan out on a board and cut into small pieces. All identical pieces should be measured the same to keep the size from varying. For example, to make small roses the same size, cut all pieces one-half inch or whatever size is needed. After cutting the pieces out, mold each piece into desired shape. The procedure for modeling the marzipan will be much the same as when you were a child and played with modeling clay or play dough. First, make a basic shape, such as small balls for apples or cylinders for bananas, and then mold to the shape you need. To make flowers, start with a small cone shape for the center, add petals one at a time until desired shape is reached. Cut petals in a basic shape, such as round, square, or a strip, and shape into the type of petal needed for a specific flower.

Let the completed decorations dry on a clean, hard surface at room temperature before placing them on the cake. If the decorations must be stored before using, carefully place them on greaseproof paper or wax paper in a box to protect them from breaking.

RUN-OUT WORK

Run-out work is also called soft sugar work. Working on greaseproof or wax paper, outline the design with icing and then fill in with soft icing. Work fast to keep the outline icing from drying out. If the outline icing is dry when the filling icing is added, the piece is likely to break.

Let the pieces dry for several days in a warm place. Leave the pieces on the paper and store in an airtight container until needed, or place on cake.

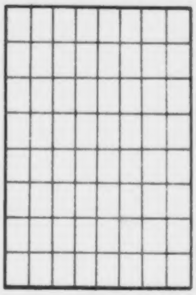
LETTERING

Lettering adds beauty and a personal touch to the cake. The types of lettering used in icing cakes include script, printing, block letters, and double letters. Icing used for lettering should be of a thin consistency so it will flow easily. Spacing the lettering on the cake is very important, as a pretty cake will be ruined if there is not space to complete a word or message. Lettering is made of curved, straight, and slanted lines. To practice lettering, write the words or letters on greaseproof paper in the size to be used on the cake surface. Place the first and last letter of each word in position and then space other letters. For script writing, start with a letter in the middle and work both ways to complete the word in the space allowed on the cake surface. As a beginning cake decorator you may want to use a stencil for a lettering guide. Place the stencil on the cake, spread icing over the lettering guide, carefully remove the stencil, and the letters will be in place on the cake surface.

Cutting and Serving Cakes

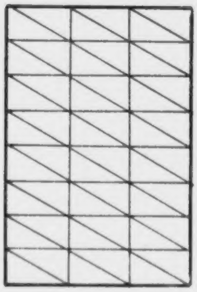
All cakes, except cupcakes and petit fours, must be cut for serving. The shape of the servings are determined by the shape of the cake. The size of the serving depends on the richness of the cake, the occasion, and the number of servings needed.

Round cakes are cut into slices. The slices may be wedge-shaped or straight, depending on how the cake is cut. Rectangular cakes may be cut into squares, rectangles, or diamond shapes. Jelly rolls are sliced across into serving-size pieces. The cutting designs below provide a general guide for cutting cakes.



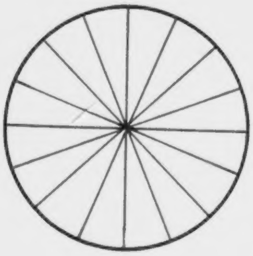
64 Servings

approx 2 x 3 inches



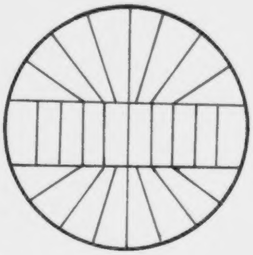
48 Servings

approx 3 x 5 inches



14-16 Servings

9-inch, 2-layer



26 Servings

12-inch, 2-layer

The appropriate tool should be used for cutting cakes. Batter cakes may be cut with a long sharp knife. Cakes served for special occasions may be cut with a sliver cake knife. Angel food or true sponge cakes should not be cut with a knife. They should be separated with a fork-like cutter. A cake divider will ensure that each piece of cake is the same size.

Cupcakes and slices of loaf cake are easily handled finger foods. Richer cakes are usually served alone. Plainer cakes can be served alone, with a frozen dessert, or with a fruit compote.

Points To Remember

- Cakes are among the most popular desserts on food service menus. They may be made or cut in a variety of shapes and served plain, iced, or decorated.
- Cakes are classified by their ingredients. Those with shortening and chemical leaveners are called shortened cakes. Those which use eggs as leaveners and usually do not contain shortening are called foam cakes.
- Many food service establishments purchase commercially baked cakes. Others use commercially prepared cake mixes or make their own master cake mixes.
- All cakes contain flour, sugar, eggs, leavener, and flavoring. Many also contain shortening and a liquid. Cake flour is usually used. It has a lower gluten content than all-purpose flour.
- Shortened cakes may be mixed by the creaming method or the blending method. For foam cakes, beating the eggs to incorporate air is part of the mixing method. Recipe directions should be carefully followed.
- Pans for shortened cakes and sponge cakes should be greased on the bottom and sides or lined with silicone treated paper. Pans for angel food and chiffon cakes should be left ungreased.
- For baking cakes, correct oven temperature, placement of pans in the oven, and timing are important for a quality product.
- Shortened cakes should be cooled slightly in the pan on a rack, then removed from the pan while the cake is still warm. Foam cakes should be cooled upside down in the pan on a rack.
- Cakes wrapped in moisture-proof wrappings will keep for several days in the refrigerator or several weeks in the freezer.
- Frostings, icings, and fillings add to the flavor and appearance of cakes, add moisture, and keep cakes from drying out. Frostings are thick, fluffy, and spreadable. Icings are thin and pourable. Fillings are spread between layers of cake to hold the layers together. Frostings may be used for fillings.
- Frostings and icings may be either cooked or uncooked. The basic ingredients are sugar, liquid, and flavoring. Uncooked frostings and icings include uncooked icings, creamed frosting, and decorator's frostings. Cooked icings and frostings are more difficult to make. Most cooked frostings in food service are made from a fondant base.
- A cake is prepared for frosting by trimming, leveling, and removing crumbs. A cake that is iced first will be easier to frost. Different frosting techniques are used for different types of cakes. Frost layer cakes on a turntable so all sides will be accessible.

- Decorated cakes are sometimes served for special occasions. Cake decorating is an art. In food service, decorated cakes are often purchased from commercial bakeries. The specialized tools for cake decorating include a decorating bag, decorating tips, and a flower nail.

- All cakes except cupcakes and petit fours must be cut for serving. The shape of the servings is determined by the shape of the cake. The size of the serving depends on the richness of the cake, the occasion, and the number of servings needed. Appropriate cutting and serving tools should be used.

- Plainer cakes are often served with a frozen dessert or a fruit compote. Richer cakes are usually served alone.

Words To Know

angel food cakes
blending method
boiled frostings
butter cakes
chiffon cakes
coventional method
cooling
creamed frosting
creaming
cupcakes
decorating bag
decorating tips
decorator's frosting
decorator's wheel
egg foam
fillings
flat icing
flower or icing nails
foam cakes
fondant
formulas
frosting
glaze
high-ratio shortening
icing
lettering
marzipan
mixing
modeling
molding
panning
pastillage
plain water icing
royal icing
run-out work
shortened
simple icing
sponge cakes
storage
uncooked icings

Questions For Review

1. What are the differences in shortened cakes and foam cakes?
2. Name and describe three types of foam cakes.
3. What ingredients are combined in a master cake mix?
4. Why is it important to follow a cake recipe accurately?
5. Describe the creaming method for mixing cake. How does the blending method differ from the creaming method?

6. For each cake ingredient below, tell (1) what the ingredient contributes to a cake, (2) in what forms the ingredient may be used, and (3) what effect too much and too little of the ingredient has on the cake.
   a. flour
   b. sugar
   c. shortening
   d. eggs
   e. leavener
   f. liquid

7. Explain the similarities and differences in angel food, sponge, and chiffon cakes.

8. How should pans be prepared for shortened and sponge cakes? For angel food and chiffon cakes?

9. Why is it important to use correct oven temperatures, placement of pans in the oven, and timing when baking cakes?

10. Describe the correct techniques for cooking and storing cakes.

11. How do frostings, icings, and fillings differ? In what ways are they alike?

12. Describe preparation and uses of simple icings, creamed frostings, and decorator's frosting.

13. Explain the procedure for making fondant. In what ways may fondant be used?

14. Explain the procedure for frosting a layered cake.

15. What is a glaze and for what is it used?

16. What three basic tools are needed for cake decorating? Why do food service establishments usually purchase commercially prepared, decorated cakes?

17. Describe appropriate techniques and procedures for cutting and serving cakes.

26

Chapter Twenty-six Pastry and Pies

COMPETENCY TO DEVELOP

- Make cookies, cakes, pies, pastries, and meringues.

OBJECTIVES TO ACHIEVE

- Identify the kinds of pastry products.
- Summarize menu uses of pastry products.
- Identify convenience pastry products.
- Identify the types of pastry dough.
- Describe procedures for preparing pastry dough.
- Identify the types of pastry filling.
- Describe procedures for preparing pastry fillings.
- Identify the types of pastry toppings.
- Describe procedures for preparing pastry toppings.
- Summarize the holding and storage of pastry products.
- Outline procedures for garnishing and serving pastry products.

The term pastry is used to refer to a large variety of baked products made from doughs rich in fat. Pastries often have fillings and toppings, but they get their name from the crust, or pastry, used to make them. Pastries include cream puffs, puff pastry, tarts, and turnovers as well as the favorite pies.

Pastry Products

Pie crust serves as the base for a variety of pies, tarts, and turnovers. A ***single crust pie*** is made with one thin layer of rolled pie dough or a crumb crust. The crust usually lines a pie plate. Single crust pies may be filled with a soft filling topped with meringue or whipped cream. Lemon meringue, chocolate cream, strawberry chiffon, custard, and pumpkin pies are ***soft-filled pies***. Quiche is an egg pie made in a single pie crust. ***Deep-dish pies*** use a single crust on the top rather than on the bottom. Deep-dish chicken, apple, peach, and berry pies are examples.

Two-crust pies have two layers of pie dough: one lining the pie plate and one covering the filling. Both the crust and the filling are baked at the same time. Most two-crust pies are filled with fruit.

Fruit pies, like apple, blueberry, peach, and cherry are the most popular type of pie.

Tarts are small single-serving pies. They may have one or two crusts. They may be filled with creamed seafood or chicken or with a fruit filling. ***Turnovers*** or fried pies are small, usually triangular, pastries filled with fruit, jam, or meat. Dumplings are made by wrapping dough around an apple or other fruit and baking until the fruit is done.

Several pastry products are made from light, rich pastry shells with a large hole in the center. ***Cream puffs*** are light round shells of pastry. They are usually filled with a cream filling or sweetened whipped cream. ***Eclairs*** (ay CLARES) are oblong, hollow pastries filled with a cream filling or whipped cream and covered with a thin chocolate icing. ***Crullers*** (CRUH lers) are deep-fried doughnuts which are lightly dusted with a fine powdered sugar.

Some pastry products are made from a pastry consisting of many layers that are paper thin. Very delicate, puffy, light pastry products are made from an extra rich, extra flaky pastry. ***Horns*** are filled with a thick cream or fruit filling. ***Pastryshells*** are used as a base for a variety of creamed dishes. ***Napoleons*** are used for cream-filled desserts.

Menu Uses of Pastry

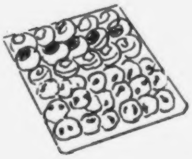
Pastries are mainly associated with desserts. However, delicious main dishes and appetizers are also made with pastries.

MAIN DISHES

Meat, poultry, or fish pies are filling and satisfying main dishes often seen on luncheon menus. The meat, poultry, or fish may be combined with vegetables in a sauce or a gravy. The mixture may be baked between two crusts of pastry or covered with a single crust of pastry.

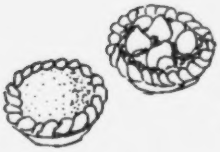
For quiche, cheese, meat, or vegetables are combined with an egg mixture and baked in a crust-lined dish. Tart shells and turnovers may also be filled with mixtures of eggs, meat, cheese, or vegetables for delicious main dishes.

APPETIZERS



Small cream puffs, patty shells, tarts, or turnovers may be filled with a savory filling of meat, chicken, or fish and served as appetizers. Small tarts may also be filled with a quiche mixture. These hors d' oeuvres are usually served hot.

DESSERTS



Pastries are most often associated with desserts. Pies are the most popular pastry dessert. Tarts make special individual desserts. Turnovers are especially popular in fast food service. Cream puffs, eclairs, and Napoleons are extra rich desserts.

Pastry

Pie crust is of American origin. The richest, flakiest pastries, choux (SHOW) paste and puff pastry, originated in Europe.

TYPES

Of the three types of pastry, pie crusts are most often made in food service. Puff pastry is difficult and time consuming to make. It may be purchased ready to shape and fill.

Pie Crust

Most ***pie crusts*** are made from a mixture of flour, shortening, salt, and water. Pie crusts may also be made from graham cracker, cookie, or wafer crumbs. The crumbs are mixed with sugar and melted butter or margarine and pressed into a pie pan. A few crusts are made of nuts or a mixture of nuts and crumbs.

Choux Paste

Choux paste is made with a thick mixture of flour, butter, eggs, and water. As it bakes, it forms a light, hollow shell. The center of the shell may be filled.

Puff Paste

Puff paste contains about the same ingredients as choux paste, but its preparation is similar to that of Danish pastries. As it bakes it forms many layers of paper-thin pastry. It is light, delicate, and puffy.

CONVENIENCE PASTRY PRODUCTS

Many food service establishments purchase commercially prepared pastries. Convenience pastry products available include mixes, frozen doughs, and uncooked and precooked pie crusts. The receiving clerk in the food service establishment should check pre-formed pie crusts for damage before accepting them.

INGREDIENTS

Most pastries are made with flour, shortening, salt, and water. Choux paste and puff paste also contain eggs. Sugar adds flavor for a sweet pastry.

Flour

All-purpose flour produces an acceptable pie crust. However, ***pastry flour***, a blend of cake flour and all-purpose flour, is best. It has a low gluten content. An unbleached pastry flour produces tender pie crusts with good color.

Bread flour with a high gluten content is used for making choux paste and puff paste. The gluten helps form the layers in the pastry.

Shortening

Shortening coats the particles of flour and separates the gluten strands. In this way it shortens or makes the pastry tender. For pie crusts, a shortening made especially for pastry is best. It mixes easily with the flour. Butter flavor may be added to improve its flavor and color. Most pie crusts are 50 to 75 percent shortening. The more shortening used the flakier the crust. For best results, the shortening should be cool (60-70°F).

Butter or margarine is used for choux paste. A specially made margarine which is waxy and pliable is used for puff paste. The butter or margarine adds color and flavor to these pastries.

Salt

Salt adds flavor, helps control the gluten formation, and aids in browning. A very fine salt which dissolves instantly is best for pastry making.

Water

The liquid used to moisten the flour so the gluten can develop in water. For pie crusts, it must be cold to prevent the shortening from becoming oily and to slow the development of gluten. The less water used the more tender the crust. Eggs will cause the pie crust to be tough and pale in color and to shrink. Too little water will make the pie dough hard to handle and result in cracking and splitting.

Eggs

Eggs add color and flavor to rich pastries. They also provide leavening action. Whole eggs in the shell are added one at a time to choux paste. Fresh liquid eggs or egg yolks are used for making puff paste.

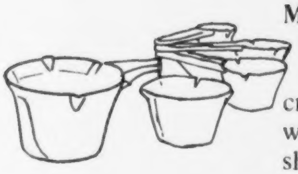
Sugar

In rich pie crusts and pastries, sugar adds flavor and tenderness and helps brown the product. Confectioner sugar is used to coat some pastries like crullers.

PREPARATION

Accurate measurement of ingredients, proper mixing methods, and careful handling of the dough help ensure quality pie crusts. Following directions for baking temperature and time are also important.

Measuring



Accurate measurement of ingredients is essential for quality pie crusts. Too much flour results in a tough crust. Excess shortening weakens the gluten strands making the dough overly tender. Too little shortening causes tough pastry. Using the exact amount of water for the shortening- flour mixture is especially important. Too much water will cause the pie crust to be tough, shrink, and be pale in color. Too little water will make the pie dough dry, crumbly, and difficult to roll.

Mixing

Pie dough may be mixed by various methods. It may be mixed by hand or with a mixer.

The type of crust produced is partly determined by the method used to combine the shortening and flour. A ***flaky crust*** results when the shortening and flour are mixed until lumps the size of small peas are formed throughout the mixture. Cold shortening is used in this method. Ice water is used to keep the shortening cold during mixing and rolling. A ***mealy crust*** results when the shortening and flour are mixed thoroughly to the consistency of cornmeal. Overmixing causes toughness.

Handling

Pie dough should be handled as little as possible. Excessive handling will overdevelop the gluten. Resting, rolling, and panning are steps in handling the dough.

Resting. The dough may be allowed to rest in a cool place for several hours to soften the gluten and make the dough easier to roll. After resting, dough with a high percent of shortening may need to be refrigerated for a short time before rolling.

Rolling. After resting, the dough should be scaled into 6-8 oz. pieces. Larger pieces are easier for beginners to handle. Each piece will make one top or bottom crust for a 9-inch pie. The dough may be rolled by hand or machine.

To roll the dough by hand, lightly flour the pastry board or canvas and rolling pin. Turn the pie pan upside down on the floured board and draw a circle around it with your finger. Shape the dough into a round ball. Place the dough in the center of the circle. Flatten the ball of dough with the palm of the hand into a round disk. Using the rolling pin, roll from the center of the dough to the edge, using light, quick strokes. Never roll back and forth because the dough will roll around the rolling pin. Check under the dough to be sure it is not sticking to the board. If it is, dust on a little more flour as needed. Roll lightly using even pressure until the dough is about 1/8-inch thick and slightly larger than the pan.

Panning. Fold the dough in half and place it in the pan with the fold in the center. Unfold the dough and shape it to the pan. Be careful not to stretch or tear the dough. Trim the crust evenly so it is a little larger than the pan.

For ***one-crust pies***, fold the dough under even with the edge of the pan. Finish the edge by fluting or crimping. To ***flute***, press the edge between the index finger and thumb of one hand and the index finger of the other hand. Repeat all around the pie, making a wavy edge. To ***crimp***, use a crimper or a fork. A crimper is a small wheel-like tool used to press the crust against the rim of the pan. If the crust is to be baked before filling, it must be ***docked***, or pierced. The bottom and sides of the crust are docked with a fork. Docking allows steam and air under the crust to escape. It prevents single crusts from shrinking or puffing up.

Some bakers prefer ***double-panning*** single crusts. To double-pan, place the rolled pie dough over the outside of the pan. Trim the edges even with the edge of the pan with a knife. Dock the crust with a fork. Cover the pie crust with another pan. Bake the crust between the two pie pans.

For two-crust pies, place the bottom crust in the pie pan but do not dock. Add the filling to the pastry-lined pan. Moisten the edge of the bottom crust with water. Fold the top crust in half. Cut several slits, or ***vents***, in the crust with a knife. The vents allow steam to escape while baking. Unfold the crust on top of the filled pie, centering the slits. Seal the top and bottom crusts by fluting or crimping. If desired, the top crust may be brushed with a ***wash*** to add color and shine. The wash may be milk, cream, or egg mixed with milk. After brushing with wash, the crust may be sprinkled with granulated sugar to add sparkle and aid in browning. An egg wash may also be brushed on pre-baked pie shells to keep the crust from becoming soggy after filling.

Quantity Production

Large operations save time by using an assembly line or by using a pie press. To produce single-crust pies using the assembly line method, three workers are needed. The first rolls out the pie dough and places it on the pan. The second trims and flutes or crimps the crust. The third fills the pie and places it on the baking rack.

To produce a two-crust pie using the assembly line method, four workers are required. The first rolls out the bottom crust and places it in the pan. The second adds the filling. The third rolls out the top crust and places it on the pie. The fourth trims and flutes or crimps the pie and places it on the baking rack.

To operate a ***pie press***, place the scaled dough in the center of the pie pan. Place the pie pan on the platform. Raise the platform to press the dough against the mold. Lower the platform and remove the pie pan. Be sure there are no air pockets under the crust.

Baking

Pies are baked in a preheated oven. Single pie crusts are baked at 425°F. A single crust is baked for 10-12 minutes, or until lightly brown. It must be cooled before filling. If the crust is double-panned, remove the second pan after the first part of baking. This allows the crust to brown. A two-crust pie is baked at 400-425°F for 15 minutes to "set" the crust before the fruit filling comes to a boil. The temperature in a conventional oven may then be lowered to 350°F until the pie is done. In a carousel oven, two-crust pies are baked at 360°F for the entire time. In a convection oven, lower the normal, conventional oven's temperature by 25-50°F. Two-crust pies may be baked on sheet pans to catch any juices that overflow.

The baking time for filled pies varies. The type filling and the method used to prepare it determines the cooking time needed. Frozen pies are baked unthawed at 425°F for 45-50 minutes. Frozen custard pies take longer.

Fillings

Pies are named for their fillings. Pie fillings should hold their shape when the pie is cut. The juice in fruit pies should run slightly when the pie is served. The filling should have a good appearance and taste.

TYPES

The four kinds of pie fillings are fruit, cream, chiffon, and custard. ***Fruit fillings*** are made with thickened fruit. They include apple, apricot, blackberry, cherry, gooseberry, peach, pineapple, raspberry, rhubarb, and strawberry. Apple is the most popular. ***Cream-filled*** pies are made with thickened milk and eggs. The flavors include banana, butterscotch, chocolate, coconut, and vanilla. Lemon filling is made with thickened water and egg yolks.

Chiffon fillings have egg whites or whipped cream folded into a cream or fruit filling. They are light and fluffy. Flavors include lemon, orange, strawberry, and chocolate. ***Custard fillings*** are milk and egg mixtures baked in a single pie crust. Custard, pecan, and pumpkin pies are examples of custard-filled pies. ***Specialty fillings*** include ones made with ice cream. Most are usually served frozen.

PREPARATION

The preparation of pie fillings involves thickening the liquid sufficiently so the filling holds its shape when served. The principles of starch cooking should be observed. The filling should never taste heavy or starchy.

Fruit Fillings

The fruits for filling pies may be fresh, frozen, dried, or canned. Because preparation of fresh fruit is time-consuming, it is seldom used in food service. Frozen fruit should be completely thawed unopened in the refrigerator before using. Dried fruits must be soaked and usually cooked before using. Canned, ready-to-bake pie fillings are frequently used.

Fruit fillings made in food service are usually prepared by one of three methods: the old-fashioned method, the hot-juice method, or the cold- juice method. In the juice methods, the juice is drained from the fruit and the fruit is set aside. The juice is sweetened with sugar.

Old-Fashioned Method. In the old-fashioned method, the fruit is mixed with the sugar, thickener, and flavorings. The mixture is placed in an unbaked pie crust. The fruit mixture is dotted with butter or margarine. The filling is covered with a top crust and baked. Because fillings made by this method are more likely to boil over or shrink than ones made by other methods, it is seldom used in food service.

Hot-Juice Method. In the hot-juice method, the fruit juice is cooked with ***waxy maize***, a modified cornstarch, until it produces a clear gel. The thickened juice is cooked slightly and poured over the fruit.

Cold-Juice Method. In the cold juice method, the fruit juice is thickened with instant starch. The mixture is stirred until thick, then mixed with the fruit. This method retains all of the fruit flavor.

Soft Fillings

Soft fillings are similar to pudding. They usually have a milk base thickened with cornstarch, instant starch, gelatin, or eggs.

Cream Fillings. To prepare cream fillings, blend the cornstarch, sugar, and salt with cold water or milk before adding it to the hot liquid. Cook the mixture on top of the range to thicken. Mix a little of the hot mixture with the eggs before adding them to the rest of the hot liquid. This keeps the mixture from curdling. Cook the mixture only about three more minutes to cook the eggs. When cooking lemon filling, add the lemon juice and grated rind after the mixture is thick. This keeps the acid from causing the starch to become runny. Also refer to Chapter 24, Desserts and Cookies, for more information on making puddings.

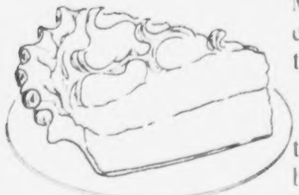
Chiffon Fillings. Chiffon fillings may be made by folding whipped cream or beaten egg white into a cream filling. Gelatin may be added to keep the filling firm.

Custard Fillings. Custard fillings are made from a milk and egg mixture which uses only eggs as the thickener. The filling and pie shell are baked together. Precooked starch may be added to help thicken the filling and prevent curdling. The filling is done when a knife inserted in the center comes out clean.

Toppings

Toppings add flavor and eye-appeal to pies. Cream and chiffon pies usually have a fluffy topping of meringue or whipped cream. Some fruit pies have a crumb topping instead of a second crust.

MERINGUE



Meringue (muh RANG) is a fluffy mixture of egg whites and sugar. Meringue may be made from fresh egg whites or frozen egg whites. The egg whites should be brought to room temperature before beating for the greatest volume.

Beat the egg whites until foamy. Cream of tarter may be added at this point, if desired. Tapioca, cornstarch, or a gum stabilizer may also be added. Beat the eggs until they stand in soft peaks. Gradually add the sugar, beating until the sugar is dissolved. The meringue should be thick, fluffy, smooth, and glossy. Overbeating makes the egg whites dry.

Dried meringue mixes are also available. They require the addition of water before beating. For best results, follow the package directions carefully.

Heap the meringue on a cooked pie filling. Swirl it to form soft peaks. Bake the meringue at 400°F for 10 minutes until lightly browned.

Sometimes meringue weeps or bleeds. This means that water droplets have formed on top or underneath the meringue. Weeping or bleeding may result from too much sugar, insufficient beating, or placing the meringue on a cold filling. Stabilizers help to prevent this problem.

WHIPPED CREAM

Whipped cream is a popular topping for pies. Cream for whipping should have at least 30 percent butterfat. Heavy cream with more butterfat is even better. It should be well-chilled. For best results, use a chilled deep bowl and whip or beater as well.

Place the cold cream in the cold bowl and whip on medium speed until it forms peaks. If the cream is beat too long, it will turn to butter. Sweeten with powdered sugar and flavor with vanilla. Serve immediately.

To improve the stability of whipped cream, stabilized liquid cream or dry milk may be added to the cream before whipping. Instant gelatin with powdered sugar may be added after the cream is whipped.

CONVENIENCE TOPPINGS

Toppings are also available in convenience forms. Whipped cream may be purchased in aerosol cans or as a mix. The mix is added to whole milk and beaten to stiff peaks. Nondairy substitutes for whipped cream are also available.

Convenience toppings cost much less per serving than whipped cream. Most remain stable for hours. Whipped cream maintains its volume only about an hour after whipping. Many convenience toppings have a taste very similar to that of whipped cream.

Holding and Storing Pastries and Pies

Most pastries taste best when served the day they are made. Pastries with fillings containing eggs, milk, meat, poultry, or fish require special care. They spoil quickly at room temperature. These pastries must be kept refrigerated. Pie crusts lose their quality quickly. Top crusts lose their flakiness. Bottom crusts may become soggy. Meringues lose their fresh appeal if not served within a few hours.

Garnishing and Serving Pastries and Pies

Rich pastries are usually served without garnishes. Fruit-filled pastries and pies may be topped with a slice of cheddar cheese, a scoop of ice cream (a la mode), or a dab of whipped cream. Deep dish pies may be served with a scoop of ice cream or a pitcher of cream. Fruit pies are best served slightly warm.

Chiffon and meringue-topped pies are usually served ungarnished. Custard pies are often topped with whipped cream. Pastries with cream, chiffon, or custard fillings are served cold.

Points To Remember

- Pastries get their name from the crust used to make them. Pastries include cream puffs, puff pastry, tarts, turnovers, and pies.
- Pastries are mainly associated with desserts but are also served as appetizers and main dishes. Meat, poultry, and fish pies and quiche are popular pastry main dishes.
- Convenience pastry products include pastry mixes, frozen doughs, and pre-cooked and uncooked frozen crusts. Receiving clerks in food service establishments should check pre-formed crusts for damage before accepting them.
- The three types of pastry are pie crusts, choux paste, and puff paste. Choux paste and puff paste contain eggs and are richer than pie crusts. As choux paste bakes it forms a light, hollow shell which may be filled. Puff paste forms many layers of paper-thin pastry, similar to Danish pastries.
- Most pastries are made with flour, shortening, salt, and water. Some pastries also contain eggs and/or sugar.
- For quality pie crusts, accurate measuring of ingredients, proper mixing methods, careful handling of dough, accurate baking temperatures, and correct baking times are important.
- A flaky crust results when a high percentage of shortening is used, cold shortening and flour are mixed until lumps the size of small peas are formed, ice water is used, and the dough is handled as little as possible.
- Large food service operations save time by using an assembly line for making pastries or by using a pie press.
- Pies are baked in a preheated oven. Single pie crusts are usually baked at 425°F for 10-12 minutes or until golden brown. The baking time for filled pies varies. Single-crust pies should be docked (pierced) before baking to prevent shrinking or puffing up. Some bakers prefer to double-pan single crusts. For double-crust pies, slits or vents must be cut into the top crust to allow steam to escape.
- Fruit fillings are made by the old-fashioned method, the hot-juice method, and the cold-juice method. Soft fillings include cream fillings, chiffon fillings, and custard fillings.
- Popular pastry toppings include meringue and whipped cream. Convenience whipped cream products or substitutes are available and are used by most food service establishments.
- Most pastries taste best when served the day they are made. Pastries with fillings containing eggs, milk, meat, poultry, or fish require special care because they spoil quickly at room temperature. They should be refrigerated.

- Rich pastries are usually served without garnishes. Ice cream and whipped cream are frequently used with pastries.

Words To Know

chiffon filling
choux paste
cream puffs
creamed filled pie
crimp
crullers
custard filling
deep dish pie
docked
double panning
eclairs
flaky crust
flute
fruit filling
fruit pies
horns
mealy crust
meringue
Napoleons
one-crust pies
pastry flour
pastryshells
pie crust
pie press
puff paste
single crust pie
soft filled pies
specialty filling
tarts
turnovers
two-crust pie
vents
wash
waxy maize

Questions For Review

1. What are five different pastry products?
2. What type of pie has a single crust on top of the pie?
3. Describe each of the following pastries:
   a. tart
   b. cream puff
   c. eclair
   d. cruller
   e. Napoleon
4. Name two main dish pastries.
5. Name and describe two appetizer pastries.
6. What are some convenience pastry products?
7. Describe a choux paste pastry product. How does a puff pastry differ from a choux pastry?
8. What does each of the following ingredients contribute to pastry? Tell what happens to the pastry if too much or too little of each ingredient is used.
   a. flour
   b. shortening
   c. salt
   d. water
   e. eggs
   f. sugar

9. Describe the procedures for preparing a flaky pie crust.

10. Tell how to prepare a one-crust pie.

11. Tell how to prepare a two-crust fruit pie.

12. Describe how to make cream fillings, chiffon fillings, and custard fillings.

13. Describe how to make meringue and whipped cream. What are the advantages of using convenience whipped cream toppings?

14. What pastry fillings spoil quickly at room temperature?

15. List three pastry products and describe an appropriate garnish for each.

27

Chapter Twenty-seven
Basic Service Skills

COMPETENCIES TO DEVELOP

- Welcome guests and oversee customer comfort.
- Handle customer complaints.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.

OBJECTIVES TO ACHIEVE

- Identify personal skills needed by service personnel.
- Identify common areas of conflict among food service workers and appropriate ways to resolve the conflicts.
- Describe factors affecting customer response.
- Identify types of customers and their characteristics.
- Describe customers who present special problems to service personnel.
- Outline ways to please customers.
- Identify types of promotional materials and displays used in food service.
- Describe menus used in food service.
- Outline salesmanship techniques effective in food service.
- Summarize methods for managing serving responsibilities.

Service personnel are responsible for dealing directly with the customer. They greet and seat customers, sell and serve food, receive money for sales, make accurate change, and keep records of sales.

Service personnel must interact effectively with customers. To do so they must develop personal skills for dealing with customers, an understanding of customers, merchandising skills, and the ability to manage their varied serving responsibilities to ensure customer satisfaction.

Developing Personal Skills

Service personnel must present a pleasing personal appearance, exhibit a pleasant personality, and portray a positive attitude. They must also communicate effectively and develop positive human relations.

PERSONAL APPEARANCE

Appearance is the first thing customers evaluate about service personnel. Good grooming is essential. Hair should be clean, an acceptable length, attractively styled, and neatly arranged. It should be pulled back off the shoulder, and/or contained in a net or hat. Facial hair should meet the establishment's requirements–usually service personnel are expected to be clean shaven. Skin should be clean and clear. Deodorant should be used to guard against odor. Strong scents should be avoided. Make-up should be tastefully applied. Teeth should be clean and breath should be odor free. Hands should be clean and unstained; fingernails should be clean, short, neatly manicured, and unpainted. Posture should be erect and poised.

Appearance includes both grooming and dress. The way you package yourself says a lot about you. Your appearance tells others how you think of yourself and what you think of them. People enjoy being around a neat, well-groomed person and view a person with a sloppy appearance as insensitive and uncaring. In addition, appearance provides the basis for first impressions.

Service personnel must avoid offensive personal habits. Do not smoke, chew gum, touch facial blemishes, comb hair, doctor cuts, or rub bruises in the presence of guests. Not only are these practices offensive, but unsanitary as well.

Most establishments require service personnel to wear uniforms. Some ask service personnel to wear personal clothing of a certain type–black slacks or skirt and a white shirt for example. More formal operations may require evening clothes. Uniforms should be properly fitted, in good repair, freshly laundered, and well-pressed. Shoes should be polished, clean, and comfortable. Hosiery should coordinate with attire and provide leg support. Jewelry should be conservative.

PERSONALITY AND ATTITUDE

Service personnel should be friendly, pleasant, courteous, enthusiastic, flexible, and likeable. These attributes contribute to a pleasing personality. ***Personality*** refers to the way a person appears and behaves toward others. Your personality is reflected by your appearance, actions, and attitudes. These factors influence the way you affect other people.

The importance of a neat, well-groomed appearance has already been discussed, but your actions need to be watched too. Often your actions tell more about you than what you say. A cheerful, alert expression indicates intelligence and a desire to be helpful; a friendly smile indicates your interest in others; looking others in the eye indicates that you are giving them your complete attention; a quick approach to serve guests tells the guests that you consider them important; an erect, well-balanced, controlled posture creates the impression of a confident, healthy person; speaking clearly with warmth and enthusiasm tells people that they are important to you and that you care about them; using words like you, your, we, and our indicate your concern with other people's needs. On the other hand, mannerisms like throat clearing, hair twiddling, head scratching, finger snapping, or humming make you seem nervous and unsure, and rudeness gives people the impression that you don't want them around.

Your ***attitude*** reflects your general outlook on life. It is the way you characteristically react to people, things, and events. If you see people as warm, friendly, lively, and helpful, enjoy being with them, and want to help them, you have a ***positive attitude*** toward people. If you see people as cold, unfriendly, dull, and lazy, dislike being with them, and have no desire to help them, you have a ***negative attitude*** toward people.

Service personnel need positive attitudes. They need to enjoy life and others, love to work, be confident of their lives, confident of their own abilities, be problem solvers, and be interested in self-improvement.

COMMUNICATION SKILLS

Service personnel communicate by speaking, listening, writing, and with nonverbal communication. Each of these skills can be developed to improve the quality of your communication.

Your voice, like your appearance, says a lot about you. Your voice reflects your enthusiasm, concern, doubt, or nervousness. Your tone of voice can convey an impression that is exactly the opposite of the words you say. For example, have you ever been asked "May I help you?" in such a way that the real message was "What are you doing here?"

Speaking

Service personnel should strive for the following qualities in their voices:

- *Alertness and vitality*. The strength of your voice should give the impression that you are wide awake, intelligent, and interested in the other person.

- *Sincerity*. Your voice should show that you mean what you say without undue emotion.

- *Distinctness.* Speak clearly and distinctly. Speak directly to your listener.
- *Pleasantness.* Your voice should be appealing and easy to listen to.
- *Expressiveness.* Vary your tone of voice to express what you are saying. Use your voice to add meaning to what you say.

Listening

Poor listening is a major barrier to communication. Poor listening may occur for several reasons. One reason poor listening occurs is that we can listen faster than we can speak. This may cause us to get ahead of the person who is talking or to be distracted by something else. Another barrier is tuning others out. Our prejudices may cause us not to listen.

Service personnel need good listening skills. Here are some pointers for becoming a good listener:

- *Be an active listener.* Listen for the main ideas and facts. Concentrate on what the other person is saying. Don't let your mind wander. Repeat what the person is saying in your own words to check your understanding.
- *Maintain eye contact.* This helps you concentrate on what the person is saying and it indicates that you are concerned with what the person says.
- *Don't let others distract you.* Besides looking at the person, you can move closer, or ask the person to speak a little louder.

Written Communication

Many service personnel also use written communication. They write food and beverage orders, total guest checks, and figure sales tax. Clear handwriting and accurate arithmetic convey a professional image. If you have poor handwriting or poor math skills, practice until you master these important means of communication.

Nonverbal Communication

Facial expressions, posture, gestures, and body movements add meaning to what is said, and are forms of ***nonverbal communication*** which all add meaning to what is said. Use these cues to more fully interpret what food service guests say to you. Also use these cues to add meaning to what you say. Smile to show friendliness. Lean forward to show interest. Walk purposefully to show work efficiency.

Human Relations

Human relations is concerned with how effectively people deal with one another. In a food service business, the degree of teamwork among service personnel and between service and kitchen personnel indicates the quality of human relations. Human relations affect productivity, creativity, morale, and, ultimately, the success of the business. Human relations also affect the way service personnel deal with customers.

Service personnel can develop good human relations with co-workers and customers by observing the following guidelines:

- Delay forming impressions as long as possible. Snap judgments are often poor. Because human beings are complex, you need to know a lot about them to form accurate opinions. Always assume your guests are the greatest people in the world.
- Try to see the other person's point of view. Too often we look at other people only from our own point of view. We can learn more about the other person by listening and observing.
- Be courteous and considerate. Treat others as you want to be treated. Remember that saying "please" and "thank you" with sincereity go a long way.
- Watch out for people's sensitivities. Avoid mentioning a person's age or weight. Avoid embarrassing a person.
- Be a good listener.
- Be cheerful and enthusiastic.
- Do more than is expected.
- Don't gossip, complain, or find fault.
- Try to be as agreeable as possible.
- Be yourself.

Cooperating with Co-workers

Food establishment personnel must function as a team. A spirit of cooperation is essential to ensure satisfied customers and increased profits. Considerate service personnel avoid inadvertently intereferring with their co-workers movements. They receive and pick up their orders in turn, are tolerant and helpful, do their parts to keep service stands neat and clean, and help one another when needed.

Despite the need for cooperation, conflicts sometimes occur. Common areas of conflict involve order pick up, cleanliness, and ***gratuities*** (tips). Waiters and waitresses sometimes accuse others of picking up their orders in the kitchen. Use of duplicate checks—one that is turned into the kitchen and one that is kept by the server—can minimize this problem. Another solution is an ***expediter*** (a kitchen traffic cop) in the kitchen to control ordering and pickup.

Disagreements result when some service personnel do less than their share of the work. Each worker must accept responsiblity for helping stock and clean service areas. Each person must be willing to return dirty dishes to the kitchen as needed.

When one waiter or waitress consistenly makes more than any other, dividing tips fairly becomes a problem. Several methods may be used to divide tips. Tips may be divided equally among all service personnel including bus persons. The share for bus persons may be determined by placing the number of bus persons over the number of waiters and waitresses and using the fraction to determine the amount each bus person will receive. Another method of dividing tips is to have each waiter, waitress, or work station give 10 to 40 percent of its tips to the bus person serving the area.

Belief that someone is taking another person's gratuities causes hard feelings among service personnel. Pocketless uniforms or pooling tips in a locked box are possible solutions. Definite station assignments can also minimize the problem. The best solution is honesty by all service personnel.

Most problems with kitchen personnel result from poor communication. Such problems can be avoided by using a system for placing and picking up orders. Any complaints about the kitchen staff should be made to the person in charge of the dining room.

During serving hours, service personnel should concentrate on serving guests. Avoid discussions with co-workers about your social life. If you have a disagreement with a co-worker, handle it quietly in the kitchen, or, better still, deal with it after serving hours.

Understanding Customers

Understanding customers is an important attribute for service personnel. Anticipating customer responses, pleasing customers, and handling customer complaints effectively are important skills to develop.

ANTICIPATING CUSTOMER RESPONSES

People eat in food service establishments for a variety of reasons. In school cafeterias, hospitals, nursing homes, and plant cafeterias customers may form a captive audience. They may have little choice about where they eat. But others may eat out in fast food establishments, restaurants, and commercial cafeterias for convenience, variety, entertainment, companionship, prestige, or celebration. People expect a pleasurable experience, personal attention, good food, and a pleasant, relaxed atmosphere.

Many of today's customers are concerned about value. They expect quality. They expect food to be safe and healthful.

Customer expectations vary as their roles vary also. A business person may want to make a good impression at a leisurely meal with a client. Students, office workers, and shoppers are often budget-minded and in a hurry. Patients may accept the necessity of a modified diet, but still expect the food to taste good. Food habits or preferences vary also. Cultural, ethnic, and family heritages often influence what people eat. Good or poor digestion, food allergies, food likes and dislikes, energy and activity levels, education, and self-awareness all influence individual eating patterns. Personal beliefs about food also affect food choices.

Knowing as much as possible about why people eat in a certain place, about their needs and motivations, and their food habits helps service personnel provide the best service possible.

TYPES OF CUSTOMERS

There are any number of types of customers. The following are typical of guests food service workers encounter that require special personal relations' skills:

- *Rushed guest.* If service can be given more quickly in another part of the restaurant (at a counter, for example), ask these customers if they would like to be served there. If not, explain as accurately and briefly as you can how long their order will take. Suggest items that are already prepared. Provide beverage and salad immediately. Offer to bring dessert with the main course. Suggest takeout orders if available.

- *Indecisive guest.* Make suggestions and do not rush the customer. If the customer takes too much time, excuse yourself and promise to return soon. Do not appear irritated or make the customer feel guilty about delaying you.

- *Dieting guest.* Know menu items appropriate for common dietary restrictions. Know, or be willing to find out, ingredients and methods used to prepare food items. Know the establishment's policy regarding special requests. Make appropriate suggestions when requested.

- *Noisy guest.* Noisy guests sometimes disturb other guests. Seat noisy guests away from others if possible. If the noise becomes a real problem, ask the headwaiter or the manager to intervene.

- *Angry guest.* Listen to the guest's complaints, express regret at the guest's displeasure, and attempt to make amends. Stay cool and calm. Answer questions with care. Do not reason with the guest. If a spill has occurred, clean the table with a service towel, place a clean napkin over the spot, and bring another serving of the spilled item. If the spill was on the floor, place a chair over the spot to prevent falls, call the appropriate person to clean the area, and offer to seat the guest at another table. If necessary call the headwaiter or the manager.

- *Complaining guest.* If the item the customer came in for is not on the menu say, "I'm sorry that you have been disappointed; may I suggest something else?" If the main dish is not done to the customer's satisfaction, exchange it without a fuss. Do not appear annoyed, upset, or in a hurry. Listen carefully. Report any complaints you cannot handle to the manager or other designated person.

- *Joking or overfamiliar guest.* Be courteous, but dignified with this undignified individual. Avoid getting involved in long conversations. Ignore comments if possible. Try to be good-natured about "kidding." Avoid going near the table except to provide needed services. If the individual gets "out of line" report him or her to the manager. Avoid making a scene.

- *Intoxicated guest.* Alert the headwaiter or manager when an intoxicated guest is present. Do not attempt to handle the drunk or drugged individual yourself.

- *Young guest.* Children can be your most delightful guests or your biggest problems. You can do much to make their visit pleasant. Provide a table out of traffic. To help prevent distractions, try to place children so they cannot see other guests. Provide a high chair as quickly as possible. Ask parents if they need a baby's bottle warmed in the microwave oven or in hot water, or if they want crackers or a cookie to keep the child happy until their food arrives. Do not ask small children what they want to order unless the parents request you to do so. Know the establishment's policy on splitting portions and on children's portions. Quietly move dangerous objects out of the reach of young children. Be friendly, but do not play with or tease the child. Provide extra napkins during the meal and a warm, wet cloth at the end of the meal.

- *Elderly guest.* An older person may appreciate a table away from the noisy areas of the dining room, but do not isolate the elderly guest from others. Assist the guest in selecting menu items to fit dietary needs. If policies permit, offer larger portions of another item if one must be skipped for dietary reasons. Remember to offer salt substitutes and artificial sweetener.

- *Blind guest.* Allow the blind customer to take your left arm and indicate that you will lead the way to a table. Do not touch the person's cane or guide dog. Remove unnecessary clutter from the table. Move condiments closer to the guest. Offer a menu to the blind customer. If the person does not want a menu, ask for food preferences. Quietly describe menu items which might interest the person and give the price of each item. For example, "We have a 10 oz. sirloin for $12.95." Speak in a pleasant voice at normal volume. Note any special request such as boning meat or buttering bread. When serving announce quietly what you are putting on the table. When you present the check, read the items ordered aloud and give the total.

- *Physically handicapped guest.* Many physically handicapped guests may require some assistance. Quietly assist by removing a chair to accommodate a wheelchair. Ask the guest with crutches if you might put them in the cloakroom. The guest with a walking cane will probably place it over the back of a chair.

- *Ill guest.* If a guest becomes ill during a meal, notify a supervisor immediately. Remain with the customer and assist as needed. Provide water if requested. Make the person as comfortable as possible. If the person has fallen and is unconscious *don't* move him or her. If the person gets up try to keep him or her calm and still until help arrives. The supervisor will find medical help. Assure the guest that help is on the way.

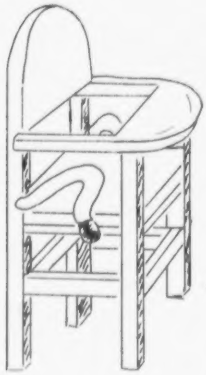
Your ability to serve customers with special needs courteously and effectively will result in repeat customers. Remember, it's to your advantage to be professional.

WAYS TO PLEASE CUSTOMERS

The good will of customers is based on their confidence in the quality of food and their appreciation of the service provided. To gain and keep the good will of customers, it is necessary to develop a favorable "image." That image results from an attractive environment, good food, and excellent service.

A genuine interest in customers and a willingness to serve them are basic for good customer relationships. You can express your interest in your guests by your attitude, your manner, and the kind of service you provide. Courtesy is essential.

Courtesy is made up of the many small gestures which make dining out a pleasure. Courtesy is even more important when you are serving a captive audience. Service personnel have many opportunities to exhibit courtesy:



- Assist customers with packages and wraps.

- Provide highchairs, bibs, and ask the parents if their child can have a cookie or cracker.

- Bring a newspaper to a person who is eating alone or waiting for the arrival of a friend.

- Correct any window glare or draft to ensure your guests' comfort.

- Arrange for music to be turned down and/or avoid seating guests directly under speakers when possible.

- Describe menu items and answer questions cheerfully when asked.

- Provide prompt service.

- Meet special requests, if possible.
- Use good manners at all times.

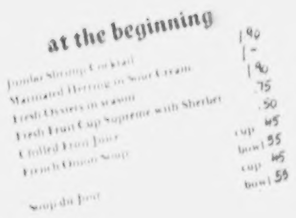
Merchandising the Menu

Service personnel have an important role in selling menu items. Restaurants get customers by word of mouth and by advertising. They use a variety of public relations techniques like getting stories and announcements in newspapers and on radio and television, sponsoring club meetings at the restaurant, and extending invitations to special groups. Once customers arrive, the interior design, placemats, menus, and table tents (cardboard advertisements folded like "tents") continue to promote the restaurant. But the most important form of merchandising is personal selling by service personnel.

THE MENU

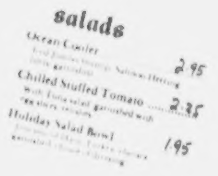
The menu is the key merchandising tool. The menu is designed to present the food served by the restaurant in the most effective way possible. Service personnel should know as much as possible about the menu. They should know the day's menu, the choices offered, the prices, how the dishes are prepared and the ingredients used, and the meaning of commonly used foreign menu terms. The Glossary includes menu terms and food names which will aid in answering customers' questions. Knowing the menu helps service personnel answer questions and suggest menu items to customers.

The two basic types of menus used in restaurants are a la carte (ah la KART) and table d'hote (tab el DOTE). ***A la carte*** means that each food item is priced separately. ***Table d'hote*** means that the menu features complete meals at set prices. Many restaurants have a combination menu which includes both a la carte and table d'hote prices. On a breakfast menu table d'hote menus may be called ***club breakfasts***. Cafeterias and fast food businesses usually display selections on a menu board.



at the beginning
Jumbo Shrimp Cocktail 1.90
Marinated Herring in Sour Cream 1 -
Fresh Oysters in season 1.90
Fresh Fruit Cup Supreme with Sherbet .75
Chilled Fruit Juice .50
French Onion Soup cup 45 bowl 55
Soup du Jour cup 45 bowl 55

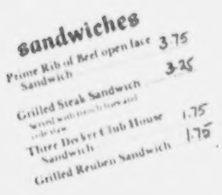
Menus may offer only a few items or many items. They may be printed or prepared each day. Different menus are generally used for each meal of the day. Each follows a fairly standard pattern.



salads
Ocean Cooler 2.95
Chilled Stuffed Tomato 2.35
Holiday Salad Bowl 1.95

The breakfast menu usually includes fruits and juices, cereals, eggs, breakfast meats, breads and rolls, and beverages. Regional foods such as grits, hashed brown potatoes, and refried beans may also be included. Both a la carte and club breakfasts may be offered.

The luncheon menu may include light foods like salads, sandwiches, or soups, as well as hardier foods. The foods are usually arranged into the following categories: appetizers, salads, sandwiches, entrees, vegetables, desserts, and beverages. Both a la carte items and luncheon specials may be offered.



sandwiches
Prime Rib of Beef open face Sandwich 3.75
Grilled Steak Sandwich 3.25
Served with french fries and cole slaw
Three Decker Club House Sandwich 1.75
Grilled Reuben Sandwich 1.75

specials of the house

Standing Rib Roast of Prime Beef
Ladies cut 5.25
Regular cut 6.50

Kabob of Beef 4.50

Barbecued Pork Back Ribs 4.50

Pan Fried Wiener Schnitzel 4.95

Calf's Sweetbreads Bordelaise 4.25

Grilled Baby Beef Liver 4.25

Dinner menus vary greatly according to the type of food service. The number of courses offered may vary from one to eight. The dinner menu usually includes appetizers, soups, salads, entrees, vegetables, desserts, and beverages. The menu may offer items a la carte, table d'hote, or both. Specials of the day may be offered for individual items or complete meals.

SUGGESTIVE SELLING

Suggestive selling means making a suggestion which increases the customer's interest in the menu items. It often enables service personnel to sell something that the customer would not have ordered otherwise. Guests' purchases can be influenced through interesting, but honest suggestions.

Suggestive selling begins with a statement with which the guest agrees. A good place to start is with what you already know about the guest. This is particularly true for regular guests. For example, you might make the following suggestions:

Guest	**Suggestion**
Tired, chilled guest	Vegetable stew
Dieter	Salad plate
Construction worker	Meat, potatoes, and gravy
Office worker	Soup and sandwich

Customers with special nutritional needs also provide opportunities for suggestive selling. Here are some suggestions:

Diet Restriction	**Suggestion**
Sugar	Fresh fruit compote instead of cake
Fat	Lean, broiled fish instead of deep fried fish
Eggs	French dressing instead of mayonnaise
Milk	Roast chicken instead of chicken a la king
Wheat	Natural unthickened meat juice
Calories	Waist-watcher special

Price is a serious consideration for some customers. For customers with limited budgets suggest such items as soup, sandwiches, noodle dishes, salads, hot cakes, and eggs.

Suggest foods which complement one another to increase the total tab. Try these suggestions:

Food	Complement
Sandwich	Soup or salad
Hamburger	Fries and a soft drink
Sweet roll	Milk or coffee
Entree	Vegetables or salad
Steak	Mushrooms or onion rings
Breakfast	Large orange juice or milk
Spaghetti	Garlic bread and salad

Always suggest appetizers, beverages, salads, and vegetables when entrees are selected. After the main course, suggest a dessert. Suggest dessert a la mode (with ice cream) or with coffee. For calorie counters, suggest fresh fruit or a beverage instead of dessert.

Make direct suggestions rather than using questions easily answered "No thank you." For example, you might say "Why don't you start your evening off with an appetizer?" or "What beverage would you like with your dinner? We have hot coffee and tea, iced tea, milk, and soft drinks." These questions are much better than "Would you like a dessert?" or "Can I get you anything else?"

Another means of suggestive selling is ***selling up*** by suggesting something more expensive than might otherwise have been chosen. For example, if a guest orders a soft drink, and doesn't state the size, your response should be "Large?" rather than "What size?" If the customer wants a sandwich, but is uncertain which one, suggest the more expensive ones first. If a guest orders a special but seems to want something more, suggest ordering the item a la carte instead and suggest complementary foods.

If a menu item is sold out, tactfully explain the shortage, suggesting another item. You may even sell a substitute at a higher price.

Use descriptive words to whet the guest's appetite. Use colorful adjectives to paint word pictures and make your guest's mouth water. Cafeteria workers have the added advantage of attractive food displays and tantalizing aromas. Try the following words to describe the taste and smell of food items:

For	Description
Fruits	Chilled, fresh, juicy, lucious, ripe
Vegetables	Bland, buttered, crisp, fresh, golden, green, hot, succulent, tender

Bread	Baked, crusty, fluffy, freshly baked, golden brown, homemade, hot, light, sweet
Cake	Chocolately, light, moist, rich, sweet, tender

Use words to describe the method of preparation such as baked, boiled, broiled, fricasseed, fried, and sauteed. Also use words to describe appealing qualities like aromatic, clear, creamy, delicate, drizzled, fragrant, mellow, savory, smooth, sour, spicy, sweet, tangy, tantalizing, tart, and zesty.

Suggest featured items of the establishment: regional or ethnic foods, items served with a flair, specialty desserts. Also suggest items associated with the time of day like pancakes and waffles in the morning or sandwiches and salads at lunch.

Sincere suggestions presented creatively will increase your sales. Know the menu and taste the food so you can make appropriate suggestions.

OVERCOMING OBJECTIONS

Not everyone will respond positively to your suggestions. Among the objections you will encounter are objections to price, selection, lack of appetite, preparation, calories, and indecisiveness. Your ability to handle objections and turn them into buying decisions will affect your sales.

Guests make objections for a variety of reasons. The guest may want to feel in control of the decision, obtain the most value for the money, or make a good choice. Always respect the guest's opinion. Some guest objections indicate a lack of knowledge about food items or preparation techniques. Some objections result from a negative experience in another setting.

The best strategy for handling objections is to use them to learn more about your guest's needs. Perhaps the guest is not really saying "no," but "maybe." Perhaps the guest needs more information. Listen carefully to what the guest says, then rephrase the objection. Try to uncover the reasons behind the objection without pressing the matter. Agree, at least in part. Add additional information to further explain your point. If a guest objects to the preparation time required, for example, you might reply, "It really doesn't take long, and it's worth the wait." Ask questions and invite your guest to ask questions. The answers may help you suggest an alternative.

ENCOURAGING REPEAT CUSTOMERS

A pleasant atmosphere, good food, and good service encourage repeat customers. Service personnel have many opportunities to influence customers to return. Provide information about food, preparation techniques, and eating customs. Offer extra service like a light for smokers, or doggie or "people" bags without being asked. Be continuously positive. Ask whether the food was to their liking. Maintain positive relations with other service personnel. Invite guests to come back.

Use personal information about your guests to serve them better. Try to remember their names, their seating and food preferences, and personal facts like where they work or where they went on their vacation.

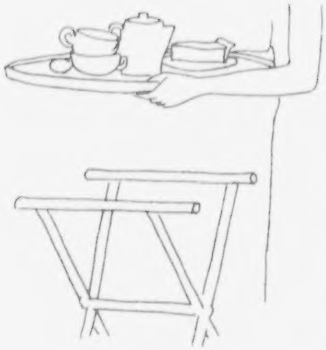
Managing Serving Responsibilities

Service personnel have many duties. Very little of their time is spent in actual customer contact. The most time is spent in preparation, going to and from the kitchen, picking up and assembling orders. Making good use of time and energy are especially important. Service personnel are also responsible for keeping costs down.

ORGANIZATION

Organization makes more time available for serving customers. The first step is knowing what your duties are and how to perform each task quickly and correctly. Pre-service duties should be completed before serving hours so attention can be devoted to customers.

Movements should be planned carefully to save energy. Plan ahead. Ask yourself, "How many things can I accomplish on this trip?" Never return to the kitchen or leave the kitchen empty-handed. Refill water glasses and coffee cups for several tables in one trip. Keep busy during slow periods. By being organized, you can handle more tables in a shorter period of time. In addition, your prompt service will mean bigger tips.



Organization includes proper loading and handling of trays. Never overload trays. Balance the items on trays carefully. Loading trays properly helps prevent breakage and spillage. It enables you to carry trays quickly, efficiently, and safely.

If the tray is to be carried on your shoulder the greatest weight should be nearest the shoulder. Place main dishes or plates at 5, 6, and 7 o'clock positions on the tray. Place lighter dishes at 3 and 9 o'clock. When clearing tables place glasses, silver, and cups in the center. Other lightweight items can be placed at 12 o'clock.

To lift the tray, use both hands. Crouch by the counter or tray stand. Place one shoulder under the 6 o'clock position of the tray. Place one hand under the center of the tray. Balance the tray on the fingertips or cushion of the fingers. Use the other hand to grasp the edge. Slide the tray onto the shoulder slowly and carefully. Stand up using the leg muscles to lift the tray. Use the free hand for opening doors and steadying the tray. To set the tray down, reverse the procedure.

If the tray is to be carried in front of you, place heavy dishes in the center. Place cups and glasses on the outside.

SAVING MONEY

Service personnel can help save money in the food service establishment. They can help reduce costs by using food, equipment, and supplies with care. They can help save money by handling checks accurately. Honesty and integrity are essential.

Reducing Costs

Food should not be wasted. Perishable foods should be kept refrigerated. Garnishes should be prepared in quantities based on expected use. Orders should be taken accurately. Careful attention should be paid to portion control. Orders should be picked up promptly from the kitchen to ensure high quality. Food such as catsup and mustard which are served in bottles or sealed containers should be re-covered and reused. Bread in open baskets should be discarded.

Equipment should be handled carefully. Dishes and glassware should be handled with care to prevent breakage. Silverware should be carefully separated from paper and garbage. Equipment should be turned off when not in use.

Supplies should not be wasted, abused, or misused. Avoid wasteful use of "disposables." Avoid staining tablecloths. Use service towels or cloths, not napkins, for cleaning.

Controlling Cash

Mistakes on guest checks and employee dishonesty can cost the establishment a substantial percentage of net profits. Service personnel have an important role in maintaining a control system. Common errors on guest checks include failure to note all items ordered, mistakes in addition, and wrongly computed sales tax. Errors in making change also cut profits. Losses caused by mistakes on guest checks and in giving change may be taken out of service personnel's pay.

Dishonesty or carelessness in the use of guest checks also costs the food service business money. To prevent theft, most establishments handle guest checks as though they were money. Numbered checks are issued to service personnel. If checks must be voided or canceled, a manager or other authorized personnel should be asked to countersign the check immediately. The check should be turned in to the cashier. Policies are established regarding issuing individual checks to large parties. The number of guests served on each check must be carefully noted to ensure that all guests pay for their meals. Policies stating that checks should be paid at the cashier station should be carefully observed.

Points To Remember

- Service personnel must interact effectively with customers in order to ensure customer satisfaction.
- Appearance is the first thing customers evaluate about service personnel. Most operations require service personnel to wear uniforms.
- Personality refers to the way a person appears and behaves toward others. Personality is reflected by appearance, actions, and attitudes. Food service personnel should project a positive attitude toward people.
- Service personnel communicate by speaking, listening, writing, and with nonverbal communication.
- Human relations is concerned with how effectively people deal with one another. Human relations affect productivity, creativity, morale, and ultimately the success of the food service business.
- Food establishment personnel must function as a team. A spirit of cooperation is essential to ensure satisfied customers and increased profits. Common areas of conflict among food service workers involve order pick up, cleanliness of the service stands, and gratuities.
- Anticipating customer responses, pleasing customers, and handling customer complaints effectively are important skills to develop.
- Certain types of guests may require special public relations skills. Among these types are the rushed, indecisive, dieting, noisy, angry, complaining, joking, intoxicated, young, elderly, blind, physically handicapped, and ill guests.
- There are several ways to please customers. Three main concerns are the establishment's image, the interest you show in customers, and displaying genuine courtesy.
- Restaurants use a variety of promotions, ranging from media presentations, to private invitations for groups.
- The menu is the key merchandising tool in food service. Service personnel have an important role in selling menu items.
- The two basic types of menus used in restaurants are a la carte and table d'hote.
- Guests' purchases can be influenced by service personnel through suggestive selling of menu items. Suggestive selling involves anticipating the customer's food desires, suggesting accompaniments for food items ordered, suggesting desserts, making direct suggestions rather than using questions easily answered "No thank you," and using descriptive words to whet the guest's appetite.
- Service personnel should develop verbal skills to overcome customer objections.

- Organization of serving tasks makes more time available for serving customers. Movements should be planned carefully to save energy.
- Loading trays properly helps prevent breakage and spillage. It allows the food service worker to carry trays quickly, efficiently, and safely.
- Service personnel can help save money by not wasting food or supplies, handling equipment carefully, and avoiding errors when handling guests' checks.

Words To Know

a la carte
attitude
club breakfast
expediter
gratuities
human relations
negative attitude
nonverbal communication
personality
positive attitude
selling up
suggestive selling
table d' hote

Questions For Review

1. Why is service personnel's appearance important to the success of a food service operation?
2. What grooming standards should be maintained by food service personnel?
3. In what three ways is the personality of a food service worker reflected?
4. Contrast positive and negative attitude.
5. List five qualities service personnel should strive for in their voices.
6. List three listening skills that are important for food service workers.
7. List three examples of nonverbal communication that convey a professional image for a food service worker.
8. Why is cooperation among co-workers important to the success of a food service operation?
9. What three areas of conflict are common in food service work? What steps can be taken by managers and workers to avoid conflict in these areas?

10. Give suggestions for dealing effectively with each of the following types of guests.

    a. rushed
    b. indecisive
    c. dieting
    d. noisy
    e. angry
    f. complaining
    g. overfamiliar
    h. intoxicated
    i. young (children)
    j. elderly
    k. blind
    l. physically handicapped
    m. ill

11. What is the difference in an a la carte and a table d' hote menu?

12. What is suggestive selling of menu items? Give two examples.

13. What is meant by "selling up"? Give an example.

14. List eight descriptive words to use to encourage customers to select vegetables from the menu.

15. What are some tips for service personnel to follow to encourage repeat customers?

16. Describe how to load, lift, and carry a food service tray.

17. How can service personnel help save money in food service establishments?

28

Chapter Twenty-eight

Sidework

COMPETENCIES TO DEVELOP

- Perform opening, closing, and sidework duties.
- Sort, count, and store utensils at designated places.
- Clear items from tables, and remove soiled items from tables and stations.

OBJECTIVES TO ACHIEVE

- Identify persons responsible for sidework duties.
- Identify sidework routines typically performed after, before, and during serving hours.
- Describe a work station and a service stand.
- Identify the equipment and supplies used in sidework duties.
- Describe procedures for performing work area duties.

Sidework includes all of the duties assigned to food service personnel in addition to service duties (duties performed during serving hours). Responsibilities for sidework duties are shared by service personnel. An assigned work area, usually a certain number of tables or counter stools, is called a ***work station***.

The overall responsibility for the dining room belongs to the headwaiter, the captain, the hostess, or a manager. In some food service establishments, the work of cleaning, preparing, and maintaining the dining room may be divided equally and rotated among all service personnel. In other establishments, a single individual may be responsible for each area of the dining room. In many restaurants, a dining room attendant (busboy or busgirl) is assigned to work with a waiter or waitress in serving a work station. In this situation, they may divide the routines.

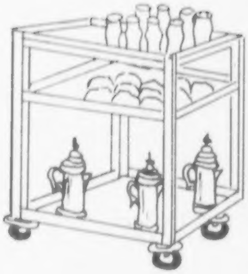
Routines

Sidework includes duties assigned before and after serving hours as well as duties performed during serving hours. Routines may vary depending on the size of the business, the number of employees, the meals served, and the type of service.

Preparation of the dining room for the arrival of customers starts the evening before, at the close of business. It continues in the morning before the first meal. Responsibilities for preparing the dining room for the arrival of customers are called closing duties and opening duties.

AFTER SERVING HOURS

Closing duties involve cleaning the dining room and putting everything in its proper place. Tables are cleared of dishes, flatware, and table coverings. Clean dishes, glassware, and flatware are appropriately stored. Tables, chairs, and other surfaces are cleaned. If tables are not to be reset, chairs are placed with the seats resting on the table. If tables are to be reset, the appropriate setting for the next meal is used.



Containers are cleaned and perishables are properly stored. Salt and pepper shakers, sugar bowls, and other condiment containers are collected on trays for cleaning and refilling. Condiment containers are cleaned. Water pitchers and ice buckets are emptied, washed, and placed, bottoms up, to dry. Ash trays, coffee pots, coffee urns, and dispensers for milk or cream are washed. Perishables like butter, bread, and baked goods are properly stored. Flowers, if still usable, are stored in the walk-in refrigerator.

Side stands and booster stands are cleaned. Electrical appliances are disconnected and gas equipment is turned down or shut off, depending on whether it is the end of the shift or the end of the day. Consumables such as matches, toothpicks, single-service napkins, dishes, cups, and flatware are restocked. For security, cabinets, pantries, and refrigerators may be locked.

Heavy cleaning of the dining area is usually done after the close of business or before the first meal of the day. Heavy cleaning is often the responsibility of a specialized cleaning crew. The cleaning crew may be part of the operation's staff or contract cleaners. Floors are cleaned, walls and windows are washed when necessary, and garbage is removed. Any rearrangement of tables, buffet tables, or special displays is also done.

BEFORE SERVING HOURS

Opening (pre-service) ***duties*** are performed at the beginning of the day or shift. Lights and necessary electrical or gas appliances such as urns and toasters are turned on. The ventilation system is adjusted.

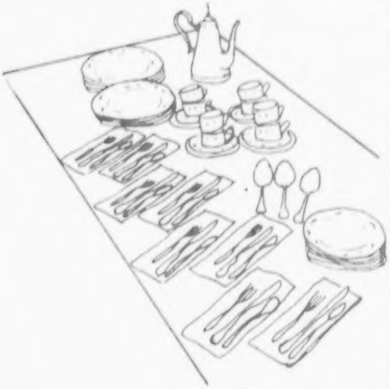
Cleaning as a sidework duty is usually done before the first meal of the day. Such cleaning may include dusting walls, curtains, and furniture, polishing furniture, cleaning mirrors and glass shelves, and sweeping or vacuuming floors.

The cleaning responsibilities of service personnel may also include sweeping the outside entry and sidewalk and picking up trash in the parking lot. Outside areas are the first and most frequently viewed area of any establishment. Sweep porches and sidewalks weekly, more often, if needed. A push broom or deck broom is best for outdoor sweeping. Remove trash daily from grounds and parking lots. Watch carefully for broken glass, sharp pieces of metal, sharp sticks, sharp rocks, and other objects which might be hazardous. A canvas bag and a litter picker (a stick, like a broom handle, with a metal spike in one end) keeps policing procedures from being a back-breaking chore.

Opening duties include inspecting dishes, glasses, and flatware. In some establishments, glassware and flatware are polished by hand. Other service articles such as serving carts, napkin dispensers, straw holders, and condiment stands may also be cleaned before the first meal of the day. Tables, chairs, countertops, and stools should be checked for alignment and cleanliness. If a table is unlevel, try rotating the table, or place a piece of cork under the leg.

Tables must be properly set with clean linen or place mats, flatware, dishes, and glassware. Salt and pepper shakers, sugar bowls, napkin dispensers, and ashtrays must be checked to be sure they are clean and ready for use. Sugar bowls, salt and pepper shakers, and condiment containers should be filled. These table appointments are then placed on tables or counters. If fresh flowers are used, they should be checked for freshness and placed on tables. Appropriate menus must be ready for use.

One of the most important duties of dining room preparation is stocking the service stand. A ***service stand***, sometimes referred to as a bus station, is the area which contains the supplies needed in the dining room. The stand is located near the work station or between the station and the kitchen. Two types of service stands are used, the side stand and the booster stand.



A ***side stand*** is a cabinet standing against a wall of the dining room or against a wall of the pantry which contains supplies needed during meal service. The side stand may be either open or closed. The open side stand displays all the articles it contains making it easy to use. Because its contents are visible, an orderly and tidy appearance must be maintained. The closed side stand covers its contents with doors or puts them in drawers making the side stand more attractive, but less efficient.

A ***booster stand*** serves the same function as the side stand, but is located in the center of the room. Some booster stands also double as pantries. They contain storage drawers, cupboards, ice machine and cabinets for holding warm breads. They have electrical outlets and running water.

The well-equipped service stand saves many trips to the kitchen. Service stands must be stocked before serving hours if they are to be of maximum use. The stand should be stocked with dishes, glasses, flatware, napkins, place mats, linens, towels, paper supplies, trays, ice, water, beverages, butter, condiments, tip trays, and carts or containers for soiled dishes. The supply of cups, glasses, plates, and flatware should be checked before each meal. If there is a warming unit in the service stand, check to see that it is working properly.

Before service begins, the service stand is stocked with the food items needed for the meal. Ice bins are filled. Coffee is made. Creamers are filled. Syrup pitchers, relish dishes, and sauce and condiment containers are filled. Necessary food items such as doughnuts, pastries, and rolls are brought from the kitchen.

When opening responsibilities are completed, dining room personnel should make a quick check of their personal appearance before customers begin to arrive. Service personnel should be clean and neat. Uniforms should be fresh. Good grooming is essential. A smile is a must.

DURING SERVING HOURS

Sidework does not end with the opening of the establishment for business. Service stand supplies must be continually replenished. Service personnel should continuously check the service stand for supplies that are getting low, for containers that need cleaning or refilling, and for an orderly appearance. During serving hours, items in the service stand can be replenished when returning from the kitchen. The service stand should be kept neat and clean at all times.

The stand can be rearranged and restocked while service personnel are not busy serving guests. During slack periods, sidework duties such as folding napkins, cleaning and filling condiment containers, and cleaning ash trays may be done.

During serving hours, tables must be cleaned and reset as needed. Remove dirty dishes from tables as quietly and quickly as possible. Check condiment containers for cleanliness and wipe them clean if needed. Wipe tables and chairs clean. Clean up food or beverages spilled on the floor immediately. Reset tables with clean linens, dishes, flatware, and glassware.

Duties

Major sidework duties include managing service stands, inspecting, cleaning, and polishing serviceware, setting and resetting tables, and cleaning the dining room. Knowing how to perform these duties is important for all service personnel.

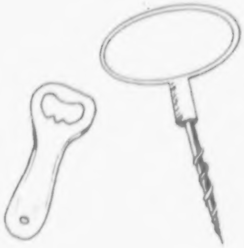
MANAGING SERVICE STANDS

One of the most important responsibilities of service personnel is managing service stands in the dining room. Before serving hours begin, each service stand should be stocked with needed supplies and food items. A check list of items and amounts needed may be posted at each service station to serve as a guide. If menus vary, special requirements of the day's menus should also be checked. During serving hours, service stand supplies should be restocked as needed.

Supplies

The supplies needed by dining room personnel during serving hours are kept in the service stand. Supplies needed for cleaning and setting tables include dishes, glasses, flatware, ashtrays, flower vases, linens, cleaning cloths, and towels. Items needed for serving food include bread baskets, tongs, serving utensils, and containers. Single-service items include paper place mats, paper napkins, doilies, coasters, straws, matches, toothpicks, and plastic eating utensils. These supplies should be counted and brought back to set inventory levels before service begins. All supplies should be stored in an organized manner where they are easy to obtain when needed.

Strict control over linens should be maintained to ensure that sufficient supplies are always on hand. Soiled napkins and tablecloths should be counted daily. The count should be recorded in an inventory book. Clean, unused linens should also be counted and the count recorded. The linens should be checked for tears and difficult stains before they are sent to be laundered. When clean linens are returned, they should be placed under unused linens. Rotating linens ensures that all linens will be fresh and the same color.



Each waiter or waitress should also obtain and organize the personal equipment needed during serving hours. The most important items are a supply of guest checks and two sharp pencils at least four inches long. Other items of personal equipment may include service cloths, matches, a bottle opener, a corkscrew, a small penlight flashlight, and a crumb sweeper.

Food Items

The food items needed at the service stand include garnishes and condiments, accompaniments, ice, beverages, dinner salads, breads, pastries, cakes, and desserts. Service personnel are responsible for stocking the service stand with these items.

Preparation of garnishes and condiments is a traditional part of dining room personnel's sidework duties. Garnishes such as lemons, parsley, and watercress require little preparation. Lemons are usually cut into wedges. Parsley and watercress are washed, drained, separated, and placed on ice until needed. Dining room personnel may portion items such as coleslaw and potato salad into individual service cups.

Condiments and sauces may be served in bottles, serving containers, or individual portions. If bottles or serving containers are used, service personnel are responsible for keeping the containers clean and filled. Service personnel may portion condiments and sauces into single-service plastic or paper cups. Tartar sauce, cocktail sauce, ketchup, and mustard may be portioned in this manner.

Many establishments use ***portion packs***, pre-portioned single-service containers of condiments, sauces, and accompaniments. Portioned jams, mustards, salad dressing, relishes, sugar, sugar substitute, and salt and pepper are often used. Accompaniments such as crackers and chips may also be preportioned. Butter may be purchased in chips or pats. These items should be served and positioned appropriately.

A supply of ice is needed in the service stand. If the stand is not equipped with an ice machine, an ice bucket should be filled and placed in the stand before service begins. The ice must be replenished as needed during serving hours.

Beverages including iced water, breakfast juices, coffee, tea, hot chocolate or cocoa, and fountain specialties are often prepared by dining room personnel. Chapter 10, Food Preparation Equipment, describes the equipment used for preparing hot beverages. Chapter 14, Beverages, describes procedures for preparing beverages.

Dairy beverages and frozen desserts may also be prepared by dining room personnel. Preparation of dairy beverages is described in Chapter 14, Beverages. Preparation of frozen desserts is described in Chapter 24, Desserts and Cookies. These items are often referred to as ***fountain specialties***.

Breads, pastries, cakes, and some desserts may be kept in the service stand. Before serving hours bread warmers should be filled. Pastries, cakes, and any desserts to be served in the dining room should be brought out from the kitchen. Pastries, cakes, and desserts may be displayed on a dessert cart.

INSPECTING, CLEANING, AND POLISHING SERVICEWARE

As ***serviceware*** (dishes, glassware, and flatware) is returned from the dish room, it should be inspected carefully for cleanliness and appearance. Items which are not clean should be returned to the dish room.

Dishes

Dishes should be inspected to be sure they are clean, unstreaked, and unchipped. Dirty dishes should be returned to the dish room. Watch especially for lipstick stains on cups. Streaked dishes should be wiped with a clean moist cloth. Chipped or cracked dishes should be removed and reported to the management.

Glassware

Glassware should be checked for cleanliness, especially for lipstick stains. Dirty glasses should be returned to the dish room. In hard water areas, glasses may have to be dipped in warm water then dried with a linen cloth or a special glass polishing cloth to remove water spots. Plain cotton towels are unsatisfactory as they leave fibers on the glasses. Proper use of glasswashing equipment may eliminate this chore.

Flatware

Flatware should be inspected for cleanliness. Check between the tines of forks for food which was not removed by washing. Return any dirty flatware to the dish room. If flatware has been properly soaked and washed, daily polishing should be unnecessary. Special cleaning machines for flatware also eliminate the need for all but occasional polishing. For convenience, individual items of flatware should be stored separately.

When polishing by hand is necessary, clean flatware is polished with a cleaning compound. The compound is removed with a moist cloth. Then the flatware is polished to a high sheen with a soft dry cloth. The flatware is then redipped in hot water and polished dry.

Service Articles

The cleaning and polishing of other service articles is also the responsibility of dining room personnel. Napkin dispensers, straw holders, pitchers, condiment stands, condiment containers, and serving carts all require cleaning and polishing.

In hard-water areas, glass containers may require special treatment. Use of a commercial deliming agent may be necessary occasionally. Follow the directions carefully. Rewash the container after use of the agent.

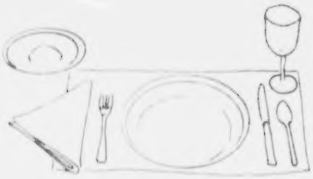
Stainless steel should be cleaned daily with a stainless steel detergent. It should be treated weekly with a deliming agent to prevent the build-up of haze and film.

Plastic items can be cleaned with a metal polish. Painted items like napkin dispensers can be washed in lukewarm water with mild soap. These items should be repainted before they become unsightly. A spray paint may be used.

SETTING AND RESETTING TABLES

Setting and resetting tables are important sidework duties. Having tables properly set before customers arrive speeds table service. Efficiency in clearing and resetting tables keeps the dining room attractive. With efficiency, it is possible to serve more customers during the serving period.

Setting



Before the first customer arrives for any meal, tables and counters should be set appropriately. Clean linens or place mats should be used. Tabletop items should be placed, filled, and cleaned as directed. Individual covers should be set appropriately for the meal. If used, fresh flowers should be placed on each table. Information on setting the table is found in Chapter 29, Styles of Service. Finally, tables should be inspected to be sure each is set properly.

Clearing

As customers finish their meals and leave, tables must be reset as quickly and quietly as possible. The first step is to clear the table of dirty dishes, glassware, and flatware. Remove glassware, flatware, and dishes in an orderly manner. Pick up glassware by the base, utensils by the handles, and plates by the rim. This practice helps protect you from any diseases or illnesses customers may have. Complete covers may be carried to the nearest bus stand or service stand. A bus cart or pan will reduce the number of trips necessary to clear a table.

To use a bus pan or tub efficiently requires organization. Do not scrape plates in the customers' view. If you cannot stack the plates because of the food on them, place them aside. Stack plates, saucers, cups, and papers in one bus pan. To avoid breakage, do not stack plates too high. Put paper to one side. Use another pan for glassware and flatware. Do not stack glasses or coffee cups inside one another. Glasses become firmly stuck together; stacked cups tip over easily. Put as many similar pieces together as possible to save time and work in the dish room. Organized bus pans can be unloaded easily and quickly.

After clearing a table, wipe it clean with a service towel used only for table tops and stored when not in use in a clean sanitizing solution. Use a second dry towel for wiping seats in booths or on chairs. Wipe crumbs into your hand or onto a plate, not onto the floor. Wipe out ashtrays with a moist service towel or disposable napkin. If you cannot get an ashtray clean, replace it with a clean one, and return the stained ash tray to the dish room.

Resetting

Reset the table without disturbing nearby guests. Replace place mats or tablecloth. If possible, the tablecloth should be changed without completely baring the table. To do so, move the table accessories to one side of the soiled cloth and fold the empty side of the cloth almost to the accessories. Place the fresh tablecloth on the bare side. Unfold the fresh cloth almost to the accessories. Move the accessories to the other side of the table onto the clean cloth. Remove the soiled cloth. Finish unfolding the fresh cloth. Reset the individual covers as appropriate for the meal. Again, handle the serviceware without touching food contact surfaces.

CLEANING THE DINING ROOM

General cleaning duties in the dining room include dusting, cleaning, sweeping, and vacuuming. These tasks are usually done before the establishment opens for business.

Dusting Furniture, Walls, and Curtains

Dusting is done before vacuuming. It is done after sweeping with a broom because the broom may throw up dust. Walls and curtains should be thoroughly dusted using a vacuum cleaner brush or whisk broom. Chairs and other furniture should be dusted and polished. Brush or vacuum upholstered furnishings frequently to remove surface dust.

Dust using a square yard of cloth folded to a 9-inch square. As the cloth becomes soiled, turn it over to a clean side or refold it to a clean side. Folded in this manner, the cloth has 32 usable surfaces. Whenever possible, use a cloth in each hand and dust with both hands to save time and energy. Begin dusting at the entrance and work around the room. Dust high surfaces first, then low ones, working downward. Use long straight strokes. Move objects and dust under them. Pick up light objects with one hand, dust under them, and replace immediately. Pay special attention to smudges, oily spots, and streaks. Dust underneath and behind furniture. Inspect your work.

A treated dust cloth may be used to keep dust from scattering. Pour the oil or polish onto the cloth rather than on the surface to be polished. These cloths may be retreated or discarded. However, oily cloths are a fire hazard. They must be stored in a fireproof container with an opening for air circulation.

A damp cloth wrung out of sudsy water is useful for some dusting. Use it to dust such things as window sills, TV screens, and washable lamp shades. Wipe wooden tables with a cloth dampened in warm water, then polish it with wax. Use a damp cloth to dust plastic and laminated surfaces. Wipe wooden chairs frequently with vinegar and water. Wax periodically.

Dust mirrors, glass shelves, and glass displays thoroughly. Clean regularly. Wipe glass-top tables with a damp cloth, then rub with a clean, dry cloth.

Dusting Floors

To dust or sweep hard-surface floors, use a dry treated dust mop. Move furniture, if necessary. Start dusting/sweeping at one end of the dining area and work toward the door. Push the dust mop ahead of you in a straight line. Lift the dust mop at the end of each stroke, but do not tap it on the floor. Overlap each stroke. Continue dusting in parallel lines until the entire area is cleaned. Clean under all stationary equipment and furniture. Take up the dirt which has been gathered using a dustpan and counter brush. Place the dirt in a plastic lined trash can. Check for dust streaks, then replace any furniture which was moved for sweeping. Clean the equipment and return it to the designated storage area.

Vacuuming

To vacuum carpeted floors, follow these steps: (1) assemble the vacuum cleaner, (2) start in the farthest corner of the room or area, (3) vacuum using a back-and-forth motion, (4) empty the vacuum bag when it is half full, (5) continue until the area is completed, (6) replace any furniture moved during vacuuming, (7) return the vacuum cleaner to the assigned storage area, (8) empty, clean, and store the vacuum as directed.

Points To Remember

- Sidework includes all of the duties assigned to service personnel in addition to service duties (duties performed during serving hours.)
- An assigned work area is called a station.
- A service stand is the area which contains the supplies needed in the dining room. Two types of service stands are used: the side stand and the booster stand.
- Sidework responsibilties for preparing the dining room for the arrival of customers are called closing duties and opening duties. Other sidework duties are performed during service hours.
- Major sidework duties include managing the service stand; inspecting, cleaning, and polishing serviceware; setting and resetting tables, and cleaning the dining room.
- Service personnel should check their personal appearance before guests begin to arrive.
- All supplies in the service stand should be inventoried regularly and stored in an organized manner where they are easy to obtain as needed.
- Food items needed at the service stand include garnishes and condiments, accompaniments, ice, beverages, breads, pastries, cakes, and desserts.
- As serviceware is returned from the dish room it should be inspected carefully for cleanliness and appearance. Items which are not clean should be returned to the dish room. Glassware and flatware may need to be polished.
- Tables and counters should be set appropriately before the first customer arrives for any meal. As customers finish their meals and leave, tables must be reset quickly and quietly.

- Appropriate use of a bus cart or pan reduces the time needed to clear tables.

- General cleaning duties usually performed by service personnel include dusting furniture, dusting hard-surface floors, and vacuuming carpeted floors.

Words To Know

booster stand
closing duties
fountain specialities
opening duties
portion packs
service stand
serviceware
side stand
sidework
work station

Questions For Review

1. What types of tasks does sidework include?
2. List some typical closing duties.
3. List some typical opening duties.
4. Define work station, service stand, side stand, and booster stand.
5. What specific supplies are kept at the service stand?
6. What regular procedures should be followed for inventorying the supplies at the service stand?
7. What food items are typically kept at the service stand?
8. What food preparation duties are traditionally performed by service personnel as sidework duties?
9. What inspecting, cleaning, and polishing tasks are part of the sidework duties for each of the following?
   a. dishes
   b. glassware
   c. flatware
   d. service articles
10. List the procedures for setting a table or counter.
11. What procedures and equipment should be used for clearing tables quickly and quietly?
12. What procedures and supplies should be used for dusting furniture, walls, and curtains?
13. What procedures and supplies should be used for dusting hard-surface floors?
14. Describe the procedures to follow when vacuuming carpeted floors.

29

Chapter Twenty-nine
Styles of Service

COMPETENCY TO DEVELOP

- Utilize appropriate customer service procedures.

OBJECTIVES TO ACHIEVE

- Describe the styles of service.
- Describe examples of dining room service.
- Demonstrate correct procedures for setting tables.
- Identify types of table settings.

Food service is versatile. Counter, trayline, seated service, or a combination of these may be offered by food service units. Food service employees need to become familiar with the styles of service available and the table settings used for each.

Food Serving Styles

Sometimes food service customers are in a hurry and want to be served quickly. At other times, food service customers want to enjoy a leisurely meal. However, whether customers pick up their food at a counter, walk through a trayline, or are served at a table, they expect courteous service.

COUNTER SERVICE

Counter service is usually found in fast-food or quick-service restaurant units. The menu is usually limited and take-out service is often available. Tables for dining may or may not be provided. The person behind the counter takes the customer's order, serves the food on a tray or in a take-out bag, and takes the money. In most fast-food units the ***counter worker*** relays the order to the kitchen where the food is assembled.

Easy-to-prepare meals, pre-packaged foods, short order items, and fountain items are usually featured in establishments which use counter service. The food may be prepared in the kitchen, on the back bar, or in view of the customer. Some food may be prepared ahead of time and stored temporarily in holding bins. Condiments, napkins, and utensils are arranged on the counter or on a condiment stand for customer self-service. Supplies and condiments needed for self-service are stored beneath the counter.

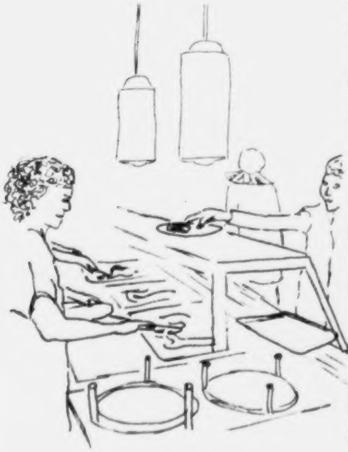
The counter worker waits on customers as they come to the counter. The counter workers should keep the counter, back bar, and area beneath the counter clean and in order. Condiments, napkins, and other counter accessories should be kept stocked and within easy reach. Some counter workers are responsible for preparing food, bussing tables, and performing other duties as requested.

Counter service saves time for the customer. Service is simple, but fast. Examples of food service establishments which use counter service are coffee shops, diners, snackbars, drive-ins, fountain-grill service, and fast-food franchises.

TRAYLINE SERVICE

Trayline service is the use of trays to transport menu items from the kitchen or the serving area to the dining room. Trayline service is used in cafeteria- and smorgasbord-style restaurants and in school and hospital cafeterias.

In trayline service, all food items are ready to serve when the customer arrives. One food service worker is usually responsible for each major work area. The food service worker is responsible for keeping containers filled, keeping serving equipment readily available, keeping the area clean, keeping food in an orderly and attractive arrangement, and controlling portions. The worker dishes or ***plates*** the food that the customer requests.



Customers usually pick up trays at the beginning of the trayline and collect the dished or plated food they have requested and place them on their trays. Customers may have meal cards which are punched at the beginning or end of the line, or may be charged for each individual item, and pay at the end of the line or as they leave.

A cafeteria trayline needs to move quickly and smoothly. The trayline worker should re-stock food items as needed, and should be ready to answer customer's questions and offer suggestions to those who are indecisive.

SEATED SERVICE

Seated service units generally have an extensive menu that offers a wide number of choices to the customer. A combination of traditional type services is characteristic of most restaurants. Food service workers should become familiar with American, French, Russian, English, buffet, banquet, and combination service.

American Service

American or plate service is the most common style of food service available in restaurants in the United States. The food ordered by each customer is put on a plate in the kitchen and garnished appropriately. The salad and bread may be served on separate plates. The waiter or waitress carries filled plates on a tray to a tray stand. Ladies, if present, are always served first. Plates are served with the left hand, from the left side of the guest. Beverages are served from the right, and soiled dishes are removed from the right. American service is fast, inexpensive, and easily learned by beginning food service workers.

French Service

French style service originated for European nobility and is used in more elaborate restaurants. Two waiters work together to "finish" the preparation at the table. The food is served from a cart, called a ***gueridon*** (gai ree DONE), and a small spirit stove, or ***rechaud*** (ruh SHOW), is used to keep the food warm. The ***chef de rang*** (or experienced waiter) may seat the guests, take the order, serve the drinks, prepare some of the food, and present the check. The ***commis de rang*** (the assistant) takes the order from the chef de rang to the kitchen, picks up the food, carries it to the dining room, serves the plates, and clears the dishes. Plates are served and cleared from the right of the guest. The butter, bread, and salad are placed to the left of the guest. A finger bowl is always served at the end of any meal. It is placed directly in front of the guest with a clean napkin. If foods such as lobster or chicken are eaten with the fingers, a finger bowl is served *with* the course.

Guests receive a great deal of attention in French service. However, it is very expensive, requires extra space, requires a larger professional staff, and is very time-consuming.

Russian Service

Russian service is much like French service but is simpler, faster, and less expensive. The food is prepared in the kitchen and the waiter picks up the food on a silver platter and then shows the food to the guest. The waiter serves the desired portion from the host's left, moving counterclockwise around the table. Unserved food is returned to the kitchen.

English Service

English service is used for a special dinner in a private dining room of a restaurant and is typical of the service in English homes where the head of the household serves the food assisted by the servants. The waiter or waitress places the food on a trolley or table in view of the guests. The "host" serves each course from the service ***tureens*** or platters onto individual plates. He then hands the plate to the waiter standing on his left who serves the hostess, guest of honor, and remaining guests. The hostess may receive all partially filled plates and serve the vegetables or other side dishes. Some side dishes may be placed on the table and passed by the guests.

Another type of English service is referred to as ***family service***. In family service, the food is prepared in the kitchen and dished up in serving platters and bowls. The serving dishes are placed in the center of the table and the food is passed around the table by the guests who serve themselves.

Buffet Service

In ***buffet service***, the guests serve themselves from a choice of foods placed on a long serving table. The plates are placed conveniently at the serving table. The silverware and napkins may be with the plates or may be preset at the dining tables. The server(s) may only be responsible for serving beverages and dessert, or may stand at the end of the table and carve and serve the meat.

Two adaptations of buffet service are ***French buffet*** and ***smorgasbord***. The French buffet is more elaborate and includes more food items. Waiters serve the guests individually. The French buffet requires extra plates and cutlery for salads and desserts.

The smorgasbord features Scandinavian foods such as pickled and smoked fish, cheeses, cold meats, salads, and vegetables. It is more elaborate than the buffet, with a greater variety of menu choices. Buffet, French buffet, or smorgasbord styles are used by caterers of large meals.

Banquet Service

Banquet service is used when serving a predetermined menu to a set number of guests. American or Russian style service is usually adapted for banquet service. The tables are prelaid including the ***cold course*** (tomato juice, shrimp cocktail, or a salad) iced water, and bread and butter. If American service is used, the food is plated in the kitchen and then served. The head table is served before the other tables are served.

The major advantage of banquet service is that many guests can be served by few staff members. This means, however, that very little personal attention is given to the guests.

Combination Service

Many restaurants use a combination of the above services. A restaurant may serve some foods from a serving cart individually, while other foods are preplated or passed around. Salad bars and dessert tables are often combined with American style service. Any style of service can be used for serving breakfast, lunch, or dinner.

Table Settings

The responsibilities of the food service worker may range from folding napkins to completely setting the table. Food service workers need to be familiar with the food service establishment's rules for table setting. These rules are designed for customer comfort and convenience. Tables should be checked for position and balance before covering. If the table is unbalanced, it can be rotated, or a piece of cork can be placed under the shorter legs. Table tops should be clean and dry.

COVERING THE TABLE

The appropriate size tablecloth, for the table should be used. The tablecloth should hang evenly and the edges should not extend below the seat of the chairs. A ***silencer*** or padding may be used beneath the top cloth to give the table a better appearance and to minimize noise. Food service workers should be able to replace a tablecloth quickly and efficiently. One way to do this is to place the centerfold of the cloth at the center of the table, open the cloth and gather it at the center, leaving one end in place, transfer the ashtrays and salt and pepper shakers to that end of the cloth, then spread the other half of the cloth over the table.

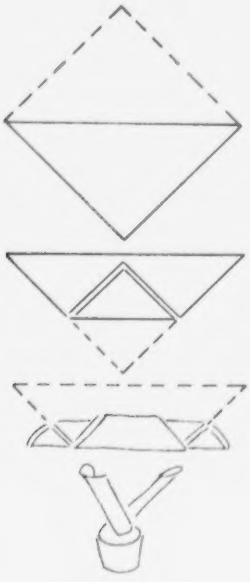
If place mats are used, they should be arranged neatly on clean tables. They may be even with or 1/2 inch in from the table edges. If the table has a rounded edge, place the mat so that the two lower corners touch the edge of the table. If the mat is round, its edge should be touching the edge of the table.

SETTING THE TABLE

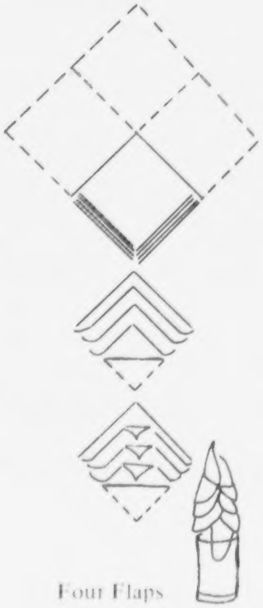
The table setting, or ***cover***, varies with the type of service used, the meal being served, and the preference of individual restaurants. The cover is the arrangement of flatware, dinnerware, glassware, and linens at each place setting. Approximately 24 inches by 15 inches is allowed for each cover. Flatware, dinnerware, and napkins should be placed about 1 inch from the edge of the table or the edge of the place mat. Covers should be laid neatly, as they are the customers' first impression of their meal.

Placing Napkins

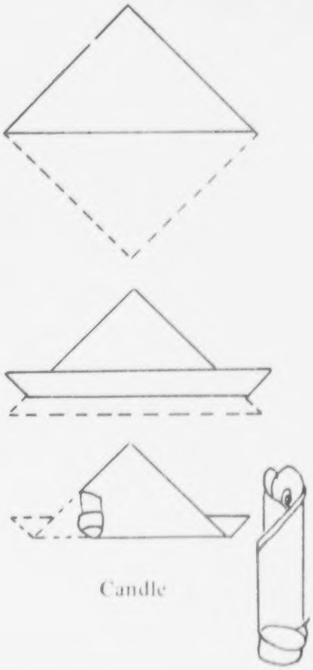
Napkins may be folded and placed to the left of the fork, or folded in special ways and stood in the center of each cover. When the napkin is placed to the left of the last fork, the bottom edge of the napkin should be about 1/2 inch higher than the bottom edge of the fork. Some trayline services roll the flatware in napkins or use paper napkins from a dispenser. The open corners of a napkin should be to the left so the guest can simply pick up the napkin and unfold it. Some elaborate folds of napkins are illustrated on the next page. However, the most elegant restaurant often uses a simple flat fold.



Fish



Four Flaps



Candle

Placing Flatware

All flatware is evenly arranged in order of use from the outside of the setting toward the plate or center of the cover. Flatware is usually placed between 1/4 inch and 1 1/4 inches from the table edge. Forks are placed on the left side of the cover with the ***tines***, or points, facing up. If the plate is not included when the table cover is set, a space of about nine inches should be left between the knives and forks. The knives are placed on the right side of the cover with the cutting edges turned toward the center. The spoons are placed to the right of the knives with the hollow or bowl of the spoon facing up.

Placing Glassware

The placement of glassware depends on its intended use. The water glass is placed on the right side of the cover above the tip of the knife. The coffee cup is placed to the right of the water glass, or to the right of the knives and spoons, with the handle turned to the right. The wine glass is placed to the right of the water glass. Glassware may be placed in order of use or aligned according to size.

Placing Dishes

The bread and butter plate is placed on the left side of the cover directly above the fork. If a butter spreader is used, it is placed across the top edge or on the right side of the bread and butter plate with the cutting edge turned toward the center of the plate. The salad plate or bowl is placed slightly below the bread and butter plate and to the left. If a dessert fork and spoon are laid, they are placed above and parallel to the plate with the handle of the spoon to the right. The dessert flatware is brought in with the dessert. If the dessert is prelaid before the meal, the flatware is placed directly above the plate.

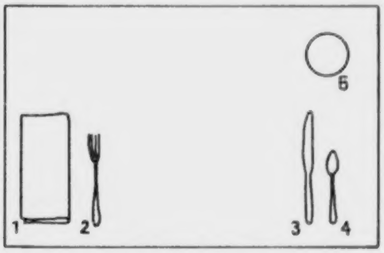
Table Accessories and Condiments

Accessories which may be placed on the table include ashtrays, matches, ***table tents*** (cardboard advertisements folded like "tents"), napkin dispensers, menu stands, flowers, straws, and candles. Condiments include salt and pepper, sweetener, bottled sauces, oil and vinegar cruets, pickles, crackers, and cream or coffee whitener. Condiments and contained accessories should be checked, cleaned, and refilled periodically. Candles should be replaced if they are burnt low, and flowers, if real, should be fresh. Table tents and menu stands should be uniformly placed.

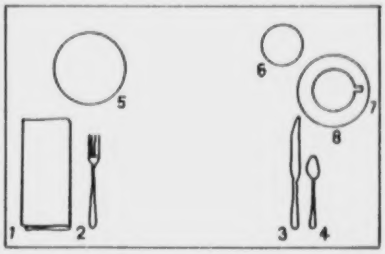
SAMPLE TABLE SETTINGS

Table settings may be arranged according to the type of service used, the meal being served, or the preference of individual restaurants.

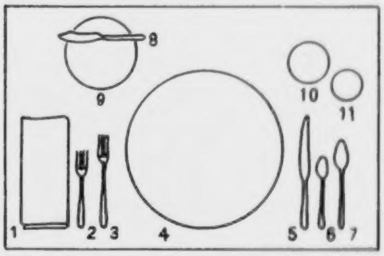
American covers vary for breakfast, lunch, and dinner. The following diagrams illustrate the differences.



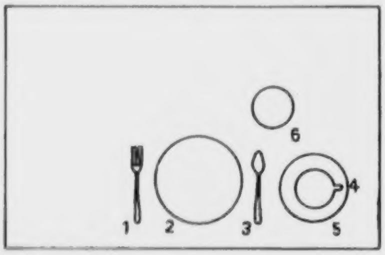
Cover setup for breakfast:
(1) Napkin, (2) Dinner fork, (3) Dinner knife, (4) Teaspoon, (5) Water glass



Cover setup for lunch:
(1) Napkin, (2) Dinner fork, (3) Dinner knife (4) Teaspoon, (5) Bread and butter plate, (6) Water glass, (7) Cup, (8) Saucer



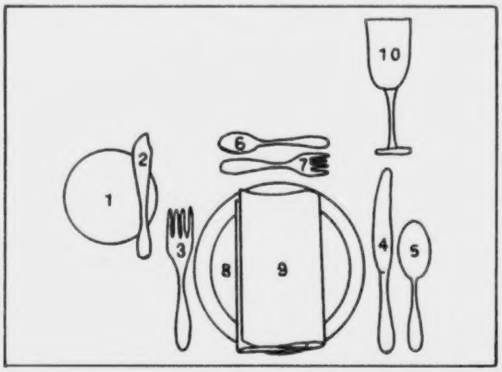
Cover setup for dinner:
(1) Napkin, (2) Salad fork, (3) Dinner fork, (4) Cover plate, (5) Dinner plate, (6) Teaspoon, (7) Soup spoon, (8) Butter spreader, (9) Bread and butter plate, (10) Water goblet, (11) Wine glass



Cover setup for dessert course:
(1) Dessert fork, (2) Dessert plate, (3) Teaspoon, (4) Cup, (5) Saucer, (6) Water glass or goblet

The English setting is similar to the American setting, but the food and plates are placed before the host at the head of the table.

The cover for French and Russian service must provide for a meal consisting of hors d'oeurves or soup, entree, and dessert. A sample cover for French or Russian service is illustrated below.



Serviceware in French service includes: (1) Butter plate, (2) Butter spreader, (3) Dinner fork, (4) Dinner knife, (5) Soup spoon, (6) Dessert spoon, (7) Dessert fork, (8) Hors d' oeuvre plate, (9) Napkin, (10) Water glass.

Restaurants which use combination service may choose to set the table according to the time of meal. Cover set ups then change throughout the day.

Points To Remember

- The types of food service are counter, trayline, and seated service.
- Counter service is usually found in fast food or quick service restaurants.
- Trayline service is used in cafeterias, in smorgasbord-style restaurants, and in schools', and hospital cafeterias.
- Seated service includes American, French, Russian, English, buffet, and banquet service. A combination of these traditional type services is characteristic of most restaurants.
- In American service, the food ordered by each customer is put on a plate in the kitchen and garnished appropriately.
- French service is the most elaborate and guests receive a great deal of attention. Some final food preparation is done at the table. Russian service is similar to French service but is simpler, faster, and less expensive.

- In English service, the host serves each course onto individual plates from service tureens or platters. Another type of English service is family service where food is passed around the table by the guests who serve themselves.

- In buffet service, the guests serve themselves from a choice of foods placed on a long serving table. The French buffet and the smorgasbord are adaptations of the buffet.

- Banquet service is used when serving a predetermined menu to a set number of guests. American or Russian style service is usually adapted for banquet service.

- Food service workers need to be familiar with the food service establishment's rules for table setting. These rules are designed for the customer's comfort and convenience.

- An appropriate size tablecloth or appropriately placed place mats should be used over a clean table. A silencer or padding may be used beneath a tablecloth.

- A cover is the arrangement of flatware, dinnerware, glassware, and linens at each place setting. Approximately 24 inches by 15 inches is allowed for each cover.

- Table accessories and condiments are part of the table setting and should be attractively arranged.

Words To Know

American or plate service
banquet service
buffet service
chef de rang
cold course
commis de rang
counter service
counter worker
cover
English service
family service
French buffet
French style service
gueridon
plates (food)
rechaud
Russian service
silencer
smorgasbord
table tents
tines
trayline service
tureens

Questions For Review

1. What types of food service is usually used in fast food or quick service restaurants? What are the responsibilities of the food service worker in this type of service?

2. In what type food service facilities is trayline service used? What are the responsibilities of the food service worker in trayline service?

3. What are the advantages and disadvantages of American style seated service?

4. Explain the characteristics of French service. Why is French service expensive?

5. How does Russian service differ from French service?

6. How does traditional English service differ from family service?

7. What are the differences in buffet service and banquet service? What are the responsibilities of food service workers for each?

8. What type foods are served at a smorgasbord? What type service is used?

9. What items are placed at one cover for a dinner meal?

10. What are the rules for placing tablecloths and place mats? What is a silencer and why is it used?

11. What are the guidelines for placing each of the following?
    a. napkins
    b. flatware
    c. glassware
    d. dishes
    e. table accessories
    f. condiments

12. Draw a diagram for one cover for an American lunch with salad, bread, entree, coffee, and water being served.

30 Chapter Thirty Table Service

COMPETENCIES TO DEVELOP

- Take dining reservations and determine seating needs, using space and personnel effectively.
- Welcome guests and oversee customer comfort.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.
- Relay orders to kitchen or serving counter.
- Pick up orders in kitchen, and verify by scanning filled plates and trays.
- Serve food and beverages in prescribed manner.
- Provide appropriate accompaniments with each course.

OBJECTIVES TO ACHIEVE

- Describe procedures for assigning guests to tables.
- Summarize procedures for greeting and seating guests.
- Describe procedures for presenting menus to guests.
- Outline procedures for writing orders.
- Describe procedures for placing orders in the kitchen.
- Cite steps in picking up, assembling, and inspecting orders.
- List the order of service for breakfast, lunch, and dinner.
- Describe procedures for serving food and beverages.
- Identify steps for removing dishes from the table.

In ***table service***, food is served to customers by a waiter or waitress. Customers may be seated at either tables or booths.

Table-service restaurants may offer limited to extensive menu choices. They may feature a certain type of food like seafood or they may carry a variety of foods. They may have a special theme such as ethnic, regional, or period. They may be primarily supper clubs or night clubs. They may be located in specially designed buildings, office buildings, department stores, shopping centers, ships, or trains. Their service may include counter service, soup and salad bars, buffet service, banquet service, room service, or take-out service in addition to table service.

Welcoming and Seating Customers

In most restaurants the guests' first contact is with the headwaiter, maitre d'hotel, or hostess, who escorts them to a table. Occasionally, waiters and waitresses may greet guests at the door and escort them to their tables.

The greeter greets the guests with a pleasant "Good morning (afternoon or evening)." If the greeter is busy, the guest may be told "I'll be with you soon."

Some restaurants take reservations for tables. If so, the person who greets the guests must determine whether the guests have reservations. If the guests have reservations, the reservation is checked off in the reservation book and the party is escorted to the assigned table. If not, the greeter asks how many persons are in the party. The greeter then selects an appropriate table for the guests.

The selection of a table may be based on the guests' preferences, age, status, or the party size. An attempt is also made to balance the dining room so that one station is not overworked. If a group or an individual appears to be noisy and disruptive, seat them well away from quieter guests. If a family has a small child who requires a highchair, seat the child where the chair does not interfere with safe passage in the aisle or around the table. Inform any blind guest of anything unexpected in their path such as steps, or at the table, placement of the cover such as a napkin in the water goblet. A guest in a wheelchair should be placed where the wheelchair will not obstruct traffic. If there is a question as to whether a guest should be allowed to dine in the restaurant, leave it up to the manager.

After an appropriate table is selected, ask the party to follow you to the table. Assist the guests with wraps and parcels if needed. At the table, pull out the best seat and offer it to the lady in a party of two, or to the eldest lady of a larger party. Assist other ladies with their chairs if needed. At wall tables, pull the table away from the ***banquette*** or sofa seat so the women in the party can seat themselves easily. Return the table to parallel with the wall.

Presenting Menus to Guests

After guests are seated, present them with menus. Before offering the menu, offer to help the guest with the napkin if it is in the way. Menus are given to guests from the left. Present the menu open or closed according to the restaurant's policy. When serving a couple, present the menu to the woman first. When serving a group, present the menus beginning with the person to the right of the host or hostess. Proceed counterclockwise around the table.

After presenting the menus, busy yourself while the guests study the menu. Remove or add extra place settings as needed. Fill the water glasses. Place bread and butter on the table.

Be prepard to answer any questions guests have concerning the menu. Be prepared to correctly pronounce the name of every dish and describe it. Know whether "in season" items are available. Know the daily specials, soups, and their garnishes. Know the preparation time required by every item. Know if any food items are sold out. Know the policies of the establishment.

Writing, Placing, and Picking Up Orders

When guests have had enough time to make their selections, stand near the table. Stand straight with both feet on the floor. Hold your order pad firmly in your hand. If guests have difficulty in deciding, point out the daily specials and answer any questions they may have. Make suggestions according to the establishment's policies. Do not appear impatient. Be helpful, but do not rush. On the other hand, learn to recognize when a guest is in a hurry and requires quick service. Generally, each restaurant has a preference for the sequence in which the order is taken at the table. Know the order your establishment prefers.

WRITING ORDERS

Before writing the order, complete the general information required on the guest check: date, table number, your name, number of people in the party. Use some system to record the location of the person receiving each order. For example, always stand at the lower left corner of the table and record orders starting with the person on your left and proceeding counterclockwise, or establish a person as a reference and note that you began with the woman wearing the red dress and proceeded counterclockwise, or mentally number the chairs, starting with a certain chair noting the location of the first chair, or use compass points (north, south, east, and west) as references.

Write or print orders clearly according to the establishment's policies. Items ordered may be checked on a printed order pad listing all food items on the menu. Items ordered may be written on a blank order pad. Be sure the order can be read by kitchen personnel. As each guest orders, clarify the order before recording it. Find out exactly what the customer wants. How should eggs be cooked and what degree of doneness is desired? What degree of doneness is desired for meat? What type of salad dressing does the customer want? What type of bread? Does the customer prefer the sauce on the side? Does the customer want a bowl or cup of soup? Which choice of vegetables or potatoes is preferred? What accompaniments are desired? Repeat the order to the customer to be sure it is correct.

Record the guest's choices on the check using abbreviations and codes which are clear to everyone—the captain, other waiters and waitresses, the kitchen, and the cashier. Standard menu items have fairly standard abbreviations. If your place of employment has an established system, use it. If not, use the following list of abbreviations to help you develop your own system:

Appetizer	**Abbreviation**
Clam chowder	Chow
Fruit cocktail	FrC
Orange juice	OJ
Shrimp cocktail	ShC
Soup of the day	S
Tomato juice	TJ

Main Dish	**Abbreviation**
Barbecue beef	BBQ
Beef burgundy	Bf Burg
Chateaubriand	Chat
Cheeseburger	C Burg
Chicken pot pie	Chix Pie
Corned beef	Crn Bf
Filet mignon	Mig
Frankfurter	Frank
Fried chicken	FChix
Ham steak	Ham S
Hamburger	Burg
Hamburger steak	Burg S
Lamb chops	LC
London broil	LB
Pork chops	PC
Pot roast	PR
Roast beef	RB
Sirloin steak	SS

Sandwich	**Abbreviation**
American cheese, mustard	AC (r,w, etc.), mus
Bacon, lettuce, and tomato	BTL
Grilled cheese	GC
Ham and Swiss, with mayonnaise	H&S (r,w, etc.), mayo
Ham on rye; ham on white	Hs, r; Hs, w
Steak sandwich	Ss

Sandwich	**Abbreviation**
Swiss cheese	Swiss
Tuna sandwich	Ts
Turkey, lettuce, and tomato	Turk (r,w, etc.), LT

Salad	**Abbreviation**
Chef's salad	CS or Chef Sal
Lettuce and tomato	LT
Tossed green salad	Sal

Dressing	**Abbreviation**
French	f
Green Goddess	gg
Oil and vinegar	ol
Russian	r
Thousand Island	t

Vegetable	**Abbreviation**
Baked beans	bb
Baked potato	bp
Baked potato with sour cream	bp,s
Carrots	c
Coleslaw	col
French fried potatoes	ff
Mashed potatoes	mash
Onion rings	or
Peas	p
Potato salad	potsl
String beans	sb

Beverage	**Abbreviation**
Buttermilk	ButM
Coffee	Cof
Coca Cola	Coke
Grape drink	Gd
Iced Coffee	I Cof
Iced Tea	I T
Milk	M
Orange drink	Od
Skimmed milk	Skim
Tea	T

Dessert	**Abbreviation**
Cake, Chocolate	C Cak
Cake, White	W Cak
Chocolate sundae (ice cream first, then syrup)	ChocOChoc or AB (all black)
Ice cream, Chocolate	Choc

Dessert	Abbreviation
Ice cream, Strawberry	Str
Ice cream, Vanilla	Van
Ice cream soda, Chocolate (Syrup first, then ice cream)	ChocOVan (O for soda) or BW (black and white)
Ice cream soda with chocolate cream and chocolate syrup	ChocOChoc or AB (all black)
Pastry, Danish	Dan
Pie, Apple	A Pie
Pie, Apple, a la mode, vanilla ice cream	A Pie, van
Pie, Blueberry	B Pie
Pudding, Chocolate	C Pud
Pudding, Vanilla	V Pud
Sundae, Chocolate (ice cream first, then syrup	VanSChoc
Sundae, Strawberry	VanSStr
Sundae, Strawberry with strawberry ice cream and syrup	StrSStr

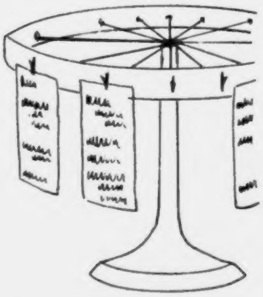
Proceed right to left around the table taking the order from each guest. If the establishment's policy permits, always ask large groups if they want separate checks.

PLACING ORDERS

Before placing the order in the kitchen, summarize the order. For example 3 sirloin steaks, 2 medium, 1 rare. Identify the items that are prepared by the kitchen. Usually the waiter or waitress is responsible for picking up fruit juice, bread, soups, butter, condiments, and beverages. The waiter or waitress may also be responsible for portioning ready-to-serve foods.

Each restaurant has its own method for placing the order in the kitchen. Four commonly used methods are outlined below:

- The waiter or waitress calls in the order in a clear voice or over an intercom. Shortcuts are used as in writing the check. For example, an order for a tuna sandwich on white bread may be stated as "tuna white." Everyone must use the same abbreviations. Some restaurants require that order placement begin with the words "ordering" and "table number ____." The person receiving the order may be required to repeat the order to ensure that the order was heard correctly.
- Written orders are placed on a spindle. New orders are added to the right. Orders are filled from the left. This keeps orders in the same sequence as they were placed. The person submitting the order may be required to read it aloud as well. When the order is ready, the cook puts the check with the order to aid in checking that the order is complete.



- A designated kitchen employee—the chef, expediter, or announcer reads the order aloud.

- The waiter or waitress punches the order in on a computerized ordering device which automatically relays the parts of the order to screens in the proper areas of the kitchen.

Whatever method is used, clear communication is very important. Place orders promptly. Strictly observe the procedures used in the restaurant. This helps avoid mixed up orders during rush hours.

When guests who are together request separate checks, notify the kitchen that those orders should be prepared at the same time. Each restaurant has its own way of showing that several checks go together. They may be given a special mark or clipped together.

Be especially careful to place orders in the kitchen. It is easy to forget during a rush. Double check the order pad to be sure. If the order doesn't appear within a reasonable length of time, check with the kitchen staff to make sure that the order has not been misplaced in the kitchen. Reassure the customers that they have not been forgotten. Offer to bring them something else such as salad or appetizer.

TIMING ORDERS

The waiter or waitress should know the preparation time required by each food item, which items are already prepared, how long food items take to cook, how long in advance to place an order to ensure that the order is ready in a reasonable time. Management should prepare a chart of cooking times needed by kitchen personnel to aid in timing orders.

When possible, most servers find it helpful to take orders from several tables at once. Food items requiring preparation can be turned in to the kitchen in a single trip. While entrees are being prepared, soups, appetizers, and beverages can be served.

PICKING UP ORDERS

In many restaurants a special call system is used to signal the waiter or waitress that an order is ready. If not, service personnel must use knowledge of approximate cooking times to estimate when the order will be ready. If possible, pick up the order right from the broiler or griddle. Try to pick up each order as soon as possible to ensure correct serving temperature.

The waiter or waitress is often required to assemble orders. While the order is being filled, gather accompaniments such as breads, relishes, juices, and serving equipment. As food items prepared in the kitchen are picked up, the waiter or waitress may be required to announce that the order is being picked up. Pick up cold foods first. Pick up hot foods next. Separate hot foods from cold foods on the tray. Add garnishes. If hot breads are served, pick them up last. Rinse tea and coffee pots with hot water before filling them with hot beverages. Never pour iced drinks into warm glasses or place butter on a warm plate.

Before leaving the serving area, check the order to be sure it is correct. Several different systems are used by restaurants for checking orders. Check the order against the duplicate order from the kitchen, if this system is used, or have the food checker check the order and total the items on the guest check, or tell the floor chef or announcer that "Table number ____ has been picked up," or finally, remove the duplicate slip from the rack.

Be sure all items ordered are present, in the right quantity, and properly cooked. If not, ask the cook to correct the order. Be sure hot foods are hot and cold foods are cold. Be sure the food is attractively served with the proper garnishes. Check for spilled food. Be sure all the needed serving equipment is on the tray. Some restaurants employ ***checkers*** to inspect each tray before it goes from the kitchen to the dining room.

Serving Food and Beverages

The way food is served is important to most customers. Customers appreciate prompt, courteous service. Observing the general rules for serving food makes service easier and helps the customer know what to expect.

The style of table service used by the restaurant is developed to meet the particular needs of the menu and the customers. The basic styles of table service are described in Chapter 29, Styles of Service. The basic styles of table service are frequently combined or adapted. Service personnel must learn and use the establishment's style of service.

Any style of service may be used in serving breakfast, lunch, or dinner. However, the order of service will vary for each meal.

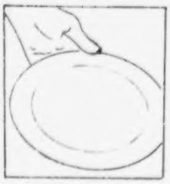
OBSERVING GENERAL RULES

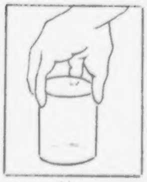
The general rules of table service are fairly simple. Once mastered, they apply to most styles of service and to any meal of the day.

When two or more persons are dining together, one must be served before the other. When a man and a woman are eating together, serve the woman first. When two couples are eating together, serve the lady on the host's right first, then the other lady, other gentleman, and the host. When three couples are eating together, serve the ladies on the right and left of the host, the gentlemen on the right and left of the hostess, then the hostess, and finally the host. When six or more people are eating together, serve the person on the host's right first and then serve the guests counterclockwise. If it is not apparent who is host or hostess, serve older persons before younger ones, ladies before gentlemen, and children after ladies.

Serve most foods from the left side using the left hand unless doing so will inconvenience the guest. Soup may be served from the right side in some restaurants. Serve and refill beverages from the right side using the right hand. Clear dishes from the right side using the right hand unless doing so will inconvenience a guest. Never reach across a guest to serve food or clear dishes except when serving at a booth or banquette.

To serve at a booth or banquette, stand at one end. Turn toward the guests on your right and serve them with your left hand. Serve guests next to the wall first and the guests sitting at the outside last. Turn toward the guests seated on your left and serve their food with your right hand. You may have to pick up beverage glasses or cups to refill them. Inform guests before you reach across the table. Be especially careful if guests attempt to assist you.


Yes


No

Place dishes on the table with four fingers of the hand under the lower edge and the thumb on the upper edge. Lower plates into place. Do not slide them. Do not lift glasses to fill them. Slide them to the edge of the table if necessary.

Serve everyone in the party at the same time. Remove a course's dishes only when everyone has finished. Never leave the place in front of a guest empty. Never scrape or stack dishes in front of guests. Follow one course with another. When serving, work quickly and quietly.

SERVING BREAKFAST

Breakfast customers are often in a hurry. Many want coffee immediately. Appetites vary greatly in the morning. Some people want only coffee. Some enjoy a very light breakfast. Others want a substantial meal.

At breakfast, it is especially important that the restaurant provide a clean, attractive atmosphere. Everything should be ready when customers arrive. The dining area should be kept clean throughout serving hours.

As soon as the breakfast guest is seated, fill the water glass, present the menu, and offer hot coffee. Place coffee to the right of the teaspoons. Give the guest a few minutes to make menu selections. Take and write the order.

Serve breakfast in courses unless the guest asks that the whole order be served at once. Serve fruit and juice orders first. Place the dish or glass on an underliner in the center of the cover. Remove the fruit service when the guest is finished.

If cereal is ordered, place the cereal bowl on an underliner in the center of the cover. Cut the individual box of cereal to make it easier to open. Place a pitcher of cream above the cover and leave it on the table. Refill water glasses and coffee cups. Remove the cereal service when the guest is finished.

Place breakfast plate of eggs, meat, or other hot food in the center of the cover. Place the toast plate to the left of the forks. Place the jam or syrup pitcher above the cover. Ask guests if anything else is needed. Refill coffee cups and water glasses. Remove the breakfast plates and bread plates when the guests are finished.

Place the sales check, face down, to the right of the cover, or present it on a clean change tray. Take the guest's money and check to the cashier, or direct the guest to pay the cashier. Return change on a small change tray.

When the guest leaves, clear the table. Reset it as directed.

SERVING LUNCH

Lunch can vary from a quick meal of soup, salad, or sandwich to a leisurely meal served in courses. The pace of service must be adjusted to the type of meal served. Office workers and students may want a quick meal. Shoppers and business persons may prefer a more leisurely meal.

After lunch guests are seated, present the menu and fill the water glasses with iced water. When guests have had time to make their selections, take each guest's order. Place butter and bread and butter plates on the table. Place hot beverage cup and saucer to the right of the cover. Place creamer above the cup. Place individual beverage pot above and a little to the right of the cup and saucer. Place cold beverages to the right and a little below the water glass.

If an appetizer, soup, or salad is ordered as a separate course, place it in the center of the cover on an underliner. Place the cracker basket to the left of the forks. When the guest is finished, remove the first service.

Serve the main dish in the center of the cover. Place individual salads served with the main course to the left of the forks. Place any side dishes above the entree. Place the tray or basket of bread and rolls to the left of the salad or near the middle of the table. Place the hot or cold beverage to the right below the water glass. When the guest is finished, remove the main course service. Remove the entree plate first, then the salad plate, bread and butter plate, and individual vegetable dishes. Remove relishes and breads. Remove any extra flatware. Brush crumbs from the table, if necessary.

Place the dessert service in the center of the cover. Place the dessert flatware in the correct position. If a fork is needed, place it on the left. If a spoon is needed, place it on the right. Refill or serve coffee. When the guest finishes, remove the dessert dishes and flatware.

Leave the water glass, napkin, and coffee service on the table. Place the check face down, or on a small change tray, to the right of the host's cover. After the guest leaves, clean and reset the table as directed.

SERVING DINNER

Dinner is usually the most formal and leisurely meal of the day. Even so, service personnel must still be alert to the needs of guests. Requests should receive prompt responses. Each course should be served promptly.

Unless the greeter has presented the menus, place the opened menu before each guest from the left side. Fill the water glasses. When guests have had time to make their selections, take the guests' orders accurately. Place bread, butter, and relish on the table, if this is the practice of the establishment.

Serve the appetizer from the left. Place it in the center of the cover. When guests have finished, remove the first course, usually from the left.

Serve the soup course from the left. Place it in the center of the cover. Offer crackers from the left of the cover or place them to the left. When the guests have finished, remove the soup service, usually from the left.

If the salad is served as a separate course either before or after the entree, place the salad plate in the center of the cover and the salad fork at the left. Serve bread and butter, if this is the practice of the establishment. When the guests have finished, remove the salad service from the left.

Serve the entree. If plate service is used, serve the filled dinner plate from the left and place it in the center of the cover with the entree closest to the guest. If the entree is served on a platter or in a casserole, place it directly above the cover with the serving flatware to the right of the platter or casserole. Place the warmed dinner plate (from the left) in the center of the cover. If the entree is to be served, place the empty plate in the center of the cover and serve from a platter. If guests serve themselves, present the platter on the left side with serving utensils on the right side of the platter and the handles toward the guest.

Place the beverage to the right of the teaspoons. Offer rolls and breads, or place them in the center of the table. Refill iced water and coffee cups as needed. When the guests have finished, remove the main course dishes from the left. Remove main course dishes in this order: (1) platter, relish dish and condiments; (2) dinner plate, salad plate, bread and butter plate, and vegetable dish; (3) empty beverage glasses; and (4) extra flatware. Remove crumbs from the table if this is part of the restaurant's procedure.

Place the dessert in the center of the cover from the left. Place the flatware in the appropriate positions. Serve hot coffee or demitasse, or refill coffee cups, as the guests desire. When the guests have finished, remove the dessert service, usually from the left. Serve or refill coffee or demitasse.

Place the check face down or on a small change tray to the right of the host. Accept the customer's payment or indicate where the bill is to be paid. Return change on a small change tray. When the guests have gone, clear and reset the table.

Points To Remember

- In table service, food is served to the customer by a waiter or waitress. The customer may be seated at either tables or booths.
- Table-service restaurants may offer limited to extensive menu choices. The restaurants may be located in specially designed buildings, office buildings, department stores, shopping centers, ships, or trains. They may offer other types of service in addition to table service.
- In most table-service restaurants, the guests' first contact is with the headwaiter, maitre d'hotel, or hostess who greets them and escorts them to a table. Occasionally waiters and waitresses may perform this function.
- Some restaurants take reservations for tables. If so, the person who greets the guests must determine if they have reservations.
- The selection of a table may be based on the guests' preferences, age, status, or the party size. An attempt is also made to balance the dining room so that one station is not overworked.
- Menus are given to guests from the left. When serving a couple, present the menu to the woman first. When serving a group, present the menus beginning with the person to the right of the host or hostess, proceeding counterclockwise around the table.
- When taking an order, address the man if the party is a couple. Address the older person if the party is two people of the same sex, and if one is not clearly the host. In larger groups, address the host. If the establishment's policy permits, always ask large groups if they want separate checks. Take orders from each guest, proceeding clockwise or counterclockwise around the table from the host.
- Write orders clearly according to the establishment's policy. Use abbreviations common to the restaurant where you work. If a common system of abbreviations is not established, develop your own system from a standard list.
- Each restaurant has its own method for placing the order in the kitchen. Four commonly used methods are waiter or waitress calls in the order; written orders are placed on a spindle; a designated kitchen employee reads the order aloud; the waiter or waitress punches the order in on a computerized ordering device.

- The waiter or waitress should know the preparation time required by each food and be able to time orders and service effectively.
- Orders should be assembled and inspected before being served.
- Service personnel must learn and use the establishment's style of service.
- General rules of table service that apply to most styles of service and to any meal of the day should be mastered. These rules apply to the order in which guests are served, the side from which guests are served foods and beverages, the order and side from which courses are removed, how to hold plates and glasses when serving, and how to serve at a booth or banquette.
- The order of service will vary for breakfast, lunch, and dinner.

Words To Know

banquette
checkers
table service
table-service restaurants

Questions For Review

1. What ranges of menu choices may be offered by table-service restaurants?
2. What are some common locations for table-service restaurants?
3. What types of service may table-service restaurants offer other than table service?
4. In most restaurants, who is the guests' first contact?
5. What are the greeter's duties in greeting guests if the restaurant takes reservations?
6. List guidelines for assigning guests to tables and for seating guests at a table.
7. List guidelines for offering menus to guests.
8. List guidelines for taking orders.
9. List common abbreviations for the following:
   a. soup of the day
   b. cheeseburger
   c. American cheese sandwich with mustard on rye bread
   d. tossed green salad
   e. oil and vinegar dressing
   f. baked potato with sour cream
   g. iced coffee
   h. chocolate ice cream soda (syrup first, then ice cream)

10. What are four common methods for placing orders in the kitchen?

11. Why is it important for waiters and waitresses to know cooking times for menu items?

12. List guidelines for assembling orders.

13. For guest already seated, what are the general rules for the order of serving?

14. What food and beverage items are served from the left? From the right?

15. List the general rules for removing dishes from the table and for refilling beverages?

16. What guidelines should be followed for serving guests at a booth or banquette?

17. What are the general rules for serving breakfast?

18. What are the general rules for serving lunch?

19. What are the general rules for serving dinner?

31

Chapter Thirty-one
Counter and Self-service

COMPETENCIES TO DEVELOP

- Welcome guests and oversee customer comfort.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.
- Relay orders to kitchen or serving counter.
- Pick up orders in kitchen, and verify by scanning filled plates and trays.
- Package take-out orders, and serve take-out customers.
- Serve food and beverages in prescribed manner.
- Provide appropriate accompaniments with each course.

OBJECTIVES TO ACHIEVE

- Identify the types of counter and self-service.
- Describe procedures for preparing the facility for counter and self-service.
- Describe procedures for taking and relaying orders.
- Identify food preparation tasks performed by counter service personnel.
- Summarize procedures for sanitizing the food service counter.
- Outline procedures for serving counter and self-service orders.
- Describe procedures for packaging take-out orders.

Many food service customers want a modestly priced meal and quick service. ***Quick-service restaurants*** meet the needs of these customers by providing counter, tray, or self-service. Counter, tray, and self-service are usually inexpensive and informal styles of service. They allow for rapid service with a minimum of appointments.

Counter service features easy-to-prepare meals, short orders, prepackaged foods, and fountain items. Counter service is used in snack bars, fountain-grill services, coffee shops, drive-ins, and diners. Food may be packaged, served on trays, or served on the counter to guests seated on stools. Packaged food and food served on trays are taken by the customer to tables to be eaten. Counter service is especially popular for breakfast, lunch, snacks, and coffee breaks. Customers can order, get their food, and eat quickly.

Self-service may be divided into cafeteria, buffet, take-out service, and automated self-service. ***Cafeteria service*** allows guests to select food displayed at service counters and to assemble their selections on trays. Cafeterias are especially popular in business districts. Buffet service offers food on a table or buffet either for self-service or to be served by an attendant. Sometimes a broiler is used behind the buffet. ***Take-out service*** allows customers to "take out" food items or complete meals. Food orders may be placed at a counter window, over an automated ordering machine, or by phone. Orders may be picked up at a take-out counter, drive-up window, or delivered. ***Automated self-service*** uses vending machines to serve the food.

Counter Service

Counter service is less complicated than table service. The primary differences are that the orders are shorter, the service is quicker, and guests are served face to face. In addition to service duties, counter workers operate beverage dispensers, make coffee and tea, prepare food, and may run the cash register as well.

PREPARING THE COUNTER

Before serving hours begin the counter worker checks supplies and restocks as needed. All necessary supplies and some food items are kept beneath the counter. The worker also washes any dishes, glassware, flatware, or serving utensils that might be left from an earlier shift. Napkins, menus, condiments, and other foods are arranged neatly on top of the counter. Covers are set at each place along the counter. Covers usually include a place mat, flatware, and a napkin.

TAKING AND RELAYING COUNTER ORDERS

Guests should be greeted to acknowledge their presence. Guests are seated at the counter, a glass of water is usually brought, and the menu is presented. The individual cover has already been laid. Sugar containers, salt and pepper shakers, catsup bottles, and other condiment containers remain on the counter throughout serving hours. Ash trays are placed within easy reach of customers.

Counters for seated-service may be in a straight line, a U-shape, or curved. They are equipped with a back bar for cooking and serving. The counter is designed for easy access by counter workers.

Guests are served in turn as they come to the counter. Either menu boards or printed menus may be used. The counter worker takes the order. The order may be written on a blank pad, a prepared pad, or entered on a computerized cash register.

When food is packaged or served on trays, payment is usually received when the order is placed. When food is served at the counter, the check may be presented after the food is served. The counter worker may take the customer's money and make correct change.

Order pads usually list each food or beverage on the menu. Numbers are used to indicate quantities. Letter abbreviations are used to provide instructions for preparing and assembling orders. For example, a drink order might use the letter "S" to indicate "small." Each establishment will have its own system.

The order may be filled by the counter worker, by food preparation personnel, or both. The check may be called out, attached to a carousel for filling, or passed to the kitchen through a window.

PREPARING FOOD FOR COUNTER SERVICE

Counter service personnel may do some or all of the food preparation. When all of the food preparation is done at the back bar, the unit is called a ***self-sufficient back bar***. A self-sufficient unit includes all of the equipment needed for food preparation and dishwashing. Easy-to-prepare meals, short orders, pre-packaged foods, and fountain items are usually featured. Food and beverages are prepared and assembled at a back bar in view of the customer.

In some establishments, food items may be prepared by food preparation personnel in a separate kitchen. When a separate kitchen is used, fewer prepared foods may be used. The kitchen is usually connected to the counter area by a pass-through window. When food is prepared in the kitchen, the back bar is used for serving.

Most counter workers have some food preparation responsibilities. Preparation responsibilities often include making coffee and tea; dispensing milk, juice, and soft drinks; preparing ice cream drinks and desserts; serving soups; and making sandwiches. The assigned items should be prepared, portioned, and served according to the establishment's policy. The chapters on food preparation (Chapters 13-26) provide information on preparing a variety of foods.

The food preparation responsibilities of counter workers are varied. Counter workers may operate equipment ranging from mixers to toasters. Workers need to be thoroughly familiar with the equipment they use.

Sanitation is especially important. Because customers can see everything behind the counter, it must be kept spotless and neat at all times. Counter workers handle more individual food items than most service personnel. Special care should be taken not to touch food with bare hands. Serving forks or tongs should be used whenever possible. Extra attention should be paid to personal hygiene.

SERVING FOOD AT THE COUNTER

Orders to be eaten at tables on the premises are usually assembled on trays. As orders are assembled, they should be checked for accuracy. Similar items should be marked by the service personnel for easy identification by the customer. For example, drink flavors may be indicated on lids.

Food to be eaten at the counter is served using American or plate service. All necessary supplies and some food items are located beneath the counter. Orders are assembled on the back bar. In some operations the counter worker is responsible for table service as well as counter service. The check is placed face down in front of the customer as soon as the order is completed. The same person should not handle both food and money.

The counter worker is responsible for bussing. Because of space limitations, dishes should be cleared and reset as soon as the guest is finished. Even if disposables are used, tables must be cleared and wiped as needed. Spills should be wiped up immediately, with special attention being paid to the floor behind the counter. The area beneath the counter and the back bar must be kept neat and clean at all times. Dishes, glassware, and flatware should be washed or taken to the kitchen for washing. Disposables should be discarded in sanitary waste containers.

Self-service

Self-service restaurants are able to provide food items quickly. Customers provide part or all of the service provided in table service for themselves.

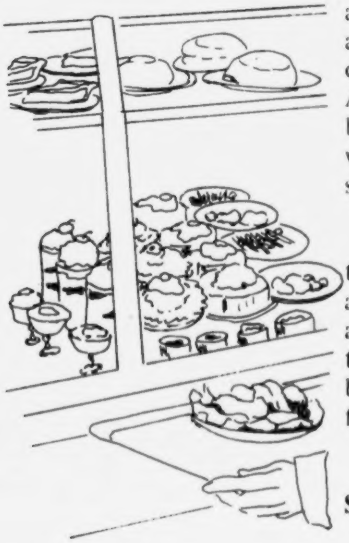
CAFETERIA SERVICE

In a cafeteria, customers serve themselves except for certain foods. Cafeteria counter workers usually serve soups, meats, and vegetables requested by the customer. The cafeteria counter must be well-stocked throughout serving hours so the line does not slow down.

Preparing the Cafeteria Counter

Before serving hours begin, workers must prepare the counters for service. Glass shelves, metal surfaces, and counter tops are polished. Supplies of trays, napkins, and flatware are replenished. Supply tables and shelves are neatly arranged. Relishes, condiments, and pre-packaged food items are assembled in the proper location. Cold pans or tables are prepared. The steam table and hot counters are prepared. An adequate supply of dishes and serving utensils are assembled. Hot and cold beverages are prepared. Hot foods, salads, desserts, breads, and beverages are attractively displayed. Some foods may also be prepared by the cafeteria counter worker.

When displaying entrees, slices of meat should be overlapped, meatballs should be placed in straight rows, and meat loaves should be placed in the center of the pan. Garnishes should be arranged attractively among the food to make it more appetizing. Appropriate serving equipment and plates or serving dishes should be placed in a convenient location.



When arranging salads, group similar ones together. Grouping helps the customer make a selection. Arrange salads to contrast in color. An arrangement of coleslaw next to potato salad and cucumber salad lacks appeal. To make a more attractive arrangement, slices of tomatoes or other colorful foods can be placed between the lighter colored salads. Arrange plates of the same size in a row. A row of salads in bowls can be used to separate two rows of plates. Try alternating rows of gelatin with rows of sliced fruits or vegetables to add variety in height and shape.

The appearance of the dessert counter is as important as the rest of the serving line. It should be kept clean and items should be arranged in an orderly and attractive manner. Group desserts according to type to aid the customer in making a selection. Keep similar foods and containers together. Keep rows straight and even. Place cake slices so that both the cake and the icing can be seen. Display the point of pie wedges facing the customer. Center both cake and pie slices on the plate.

Serving Food on the Trayline

As customers approach, they should be greeted. Ask customers which food items they would like. Answer questions and make menu suggestions as needed. A pleasant, friendly manner and courtesy are essential.

The cafeteria counter worker serves the food the customer requests. Serve the exact portions directed. Incorrect portioning can result in unhappy customers or loss of profits. Know what size plate or bowl is to be used for each food item.

When serving food, place it within the rim of the plate. Never allow food to extend over the edge. Place relishes accompanying meat near the meat and away from potatoes to prevent the relish and gravy from mixing. If needed, wipe food particles from the rim of the plate with a clean cloth before handing the plate to the customer.

Salads may be pre-portioned in individual serving dishes or the server may serve the correct portion in a dish. Do not disturb the arrangement of the salad in the serving bowl. It should look equally appealing to the next customer.

Entrees are served from the steam table. Ask for all necessary information before serving the food. Typical questions might be "Do you care for gravy with your meat?"; "Do you want rare, medium, or well-done meat?"; "Do you want toast with the creamed tuna?" If hot vegetables are served with the entree, ask which vegetables the customer would like to accompany the meal.

Desserts are usually pre-portioned before serving hours. Customers serve themselves. If the customer wants a special sauce or the dessert desired is not displayed, provide the needed assistance.

Beverage service may be self-service or a worker may serve the beverages. At self-service stations, keep the ice and beverage dispensers well-stocked.

At the end of the line, the customer's purchases are tallied by a food checker. The bill is marked to indicate the number of customers checked on one ticket. The bill is given to the customer. Depending on the restaurant, payment may be made at this point or after the customer finishes eating.

Obtaining Food and Supplies

Cafeterias use different systems for obtaining food and supplies during serving hours. Each cafeteria counter worker serves certain foods and is responsible for re-stocking the counter as needed during slow periods. Some cafeterias employ ***runners*** or ***supply workers*** to keep the counters supplied. The runners keep the cooks informed of the demand for certain foods. They keep the counter worker informed of the food supply in the kitchen. This eliminates the need for counter workers to leave the counter to restock needed items.

Some cafeterias use an intercom system to communicate between the counter and the kitchen. The counter worker notifies the cooks when food or supplies are needed. Items may be delivered by an electric conveyer or a kitchen worker.

When replenishing food, exchange full pans for empty ones. Do not add fresh food to the food left in containers. Scrape food off the sides of the containers to prevent the food from drying out and appearing unappetizing. As salads and desserts are taken by customers, move new ones forward from the back and add fresh items behind.

During service, wipe the rims of the containers brought from the kitchen before placing them on the steam table or cold storage units. Keep pans filled because customers hesitate to take the last portion.

Attending the Dining Room

The customer takes the tray of food to the dining area to eat. The customer removes the food from the tray and arranges it on the table. Tray stands may be provided for emptied trays. Condiments may be available on self-service condiment stands.

A dining room attendant may be assigned to the dining area. Initially, the attendant might help seat elderly or handicapped people, or people with small children. Attendants may also bring condiments like ketchup, mustard, and steak sauces at the customer's request. Attendants serve foods that are being cooked-to-order like eggs, steaks, and pancakes. The customer is provided an identifying ticket for these items while passing through the serving line. Dining room attendants supply supplemental orders and make corrections and additions to the check. They supply napkins and extra flatware as needed. They refill water, iced tea glasses, and coffee cups. They may remove main course dishes when customers are ready for dessert.

Dining room attendants remove soiled dishes from the table when customers leave. They clean table tops and chair seats. They replace covers and ashtrays. They clean the floor area around the table and push chairs back into place after the customers leave.

Closing Cafeteria Counter Duties

After serving hours, the cafeteria counter worker puts away food and cleans the serving units. Food should be properly stored. The steam table, hot tables, cold tables, counter tops, glass shelves, and tray and flatware holders are emptied and cleaned. Storage areas and shelves are cleaned. Coffee urns and other beverage containers are emptied and cleaned.

BUFFET SERVICE

Buffet service may be simple or elaborate. It may be provided for part or all of the meal. In buffet service, a variety of appetizers, hot and cold entrees, vegetables, and salads are displayed on a long table. The table is usually placed where guests can walk around it and serve themselves.

Preparing the Buffet

Service personnel are responsible for arranging the buffet serving line. Guest plates are placed at one end. Cold dishes, main dishes, salads, and breads follow. If individual covers are not set on each dining table, napkins and flatware may be placed at the other end. Separate tables may be provided for appetizers, beverages, and desserts to eliminate congestion, or these items may be served at the guests' tables.

Serving the Buffet

During serving hours, service personnel may serve some food items. Roasts are often carved as guests pass through the serving line. Customers collect their food on plates. They then take the food to a table and seat themselves.

Beverages, bread and butter, and desserts may be served at the table by a dining room attendant. Beverages should be refilled as needed during the meal. The check is presented when guests finish their meal. Tables are reset with clean linen and tableware after guests leave.

TAKE-OUT SERVICE

In take-out service, foods are packaged for consumption off the premises. Take-outs may be a complete meal, a single item, or meal combinations. Many restaurants combine take-out service with table and counter service.

Many fast food operations feature take-out service. The foods featured include beverages, hamburgers, hot dogs, fried chicken, fried fish, and French fries. Fast food restaurants with take-out service are popular with travelers. Many do not want to take the time from driving to sit down at a table and be served a meal. For this reason, these facilities are often found along highways. In cities, these facilities are popular with office workers, shoppers, and families with young children.

Some seated-service restaurants and cafeterias offer take-out service. Take-out service may offer featured menu items such as barbecued chicken, pizza, or ethnic specialties. Many people like to pick up food from their favorite restaurant for a quick meal, or to feed unexpected guests.

Preparing the Take-out Counter

The take-out counter must be kept clean, orderly, and well-stocked. The counter and other areas visible to customers should be cleaned and polished before serving hours. Supplies of disposables and pre-packaged foods should be restocked. During serving hours, supplies should be restocked as needed.

Taking Take-out Orders

The customer places the take-out order at a drive-up window, or over an intercom, or goes to a counter window inside to order. Orders may also be phoned in and picked up or delivered. Orders are placed from a posted or printed menu. The carry-out worker records the order on a guest check, a prepared form, or computerized cash register. The order should always be repeated to the customer to make certain that it is correct. Additional complementary foods should be suggested. At the counter window, the customer is usually asked whether the order will be consumed on the premises or taken out. This information is indicated on the order to ensure that it is packaged properly. The customer should be told when the order will be ready. All orders placed at the drive-up window are packaged to go.

Filling Take-out Orders

After the take-out order is recorded, it is relayed to the kitchen or preparation area. Some restaurants pass a written copy of the order to the kitchen. Some pass orders verbally. New computerized systems allow the order to go directly to the kitchen for the cook to see on a screen.

In fast food establishments, a production line is usually used to prepare orders. A grill cook prepares hot foods, then passes them to a helper who wraps or plates them. The helper pushes the order onto a heat table to the counter worker. During rush hours, foods are usually prepared ahead and held on a heat table or steam table until needed. Items like barbecue sauce and chili may be pre-prepared and kept hot in a steamer. The food preparation area may be totally visible to the consumer or be a separate kitchen.

The counter worker assembles the take-out order and may prepare beverages. The worker may also prepare other items like cold sandwiches, French fries, and ice cream beverages and desserts. Foods are wrapped, sacked, boxed, placed in disposable containers, or served on a tray. Lids are placed on beverages to prevent spilling. Appropriate accompaniments such as sugar, salt, pepper, and sauces are included. Straws, plastic utensils, and paper napkins are provided. For orders consumed on the premises, accompaniments and supplies may be placed on a self-service table or bar. The counter worker then serves the customer, adds the sales check, collects the money, and makes change.

Closing Duties for Take-out Workers

After serving hours, the facility must be readied for the next serving period. Return all food and beverages to the kitchen. Thoroughly clean milk dispensers, coffee urns, and other beverage dispensers. Clean condiment containers and replenish as needed. Turn off and unplug electric and gas equipment. Sweep, vacuum, or mop floors. Clean restrooms. Clean counters and tables. Wash dishes. Turn out the lights. Shut and lock the doors if the business is closing.

AUTOMATED SELF-SERVICE

Vending machines and automats are forms of automated self-service. Vending stations are found in office buildings and schools, and in bus, railroad, and airline terminals.

Vending Machines

Vending machines may contain either cold or hot foods. Some offer cold foods like sandwiches, salads, and beverages. Others contain hot foods like coffee, cocoa, soups, and main dishes. Some vending machines provide frozen foods which may be heated in a nearby microwave oven.

The customer places coins in a slot in the machine. The food selected is indicated by pushing a button. The food is automatically presented from an opening in the machine.

Automats

Another form of self-service is the ***automat***. It displays each food item behind a small glass door. The customer inserts coins into a slot. The door opens allowing the food to be removed.

Points To Remember

- Quick-service restaurants meet the needs of their customers by providing counter, tray, and self-service. Service is usually inexpensive and informal.
- Counter service features easy-to-prepare meals, short orders, prepackaged foods, and fountain items. Counter service is used in snack bars, fountain-grill services, coffee shops, drive-ins, and diners.
- Self-service includes cafeteria, buffet, take-out, and automated self-service.
- In addition to service duties, counter workers operate beverage dispensers, make coffee and tea, prepare food, bus counters and tables, and may handle the cash register as well.
- The counter worker stocks supplies and some food items beneath the counter, washes dishes, keeps napkins and condiments restocked on the counter, and sets covers.
- Counter workers greet guests and serve them in turn as they come to the counter. Either printed menus or menu boards may be used. Orders are taken on a blank pad, a prepared pad, or entered on a computerized cash register.
- Orders may be filled by the counter worker, by food preparation personnel, or both. When all the food preparation and clean-up is done at a back bar, the unit is called a self-sufficient back bar.
- Sanitation is especially important for counter workers. Counter workers handle more individual food items than most service personnel.
- In self-service restaurants, customers provide part or all of the service provided in table service for themselves.
- In cafeteria service, before serving hours begin workers must prepare the counters for service. This involves polishing counter surfaces, stocking supplies and condiments, preparing cold tables and steam tables, assembling serving dishes and utensils, preparing hot and cold beverages, preparing some foods, and arranging foods attractively on the counter.

- As customers approach, the cafeteria worker greets them, plates their choices attractively, portions food correctly, suggests menu items, assists customers as needed, and sees that food supplies are restocked. The customer's purchases are usually tallied by a checker at the end of the cafeteria line.
- The cafeteria dining room attendant may be assigned a variety of duties. These duties may include assisting elderly or handicapped people or people with small children, bringing condiments to tables at the customer's request, and refilling water, iced tea glasses, and coffee cups.
- Buffet service may be simple or elaborate. The buffet table is usually placed where guests can walk around it and serve themselves.
- During buffet serving hours, service personnel may serve some food items, such as carving and serving a roast at the buffet table. Beverages, bread and butter, and desserts may be served at the tables after guests collect their food at the buffet table. The check is usually presented when guests finish their meal.
- In take-out service, foods are packaged for consumption off the premises. Take-outs may be a complete meal, a single item, or meal combinations.
- The customer places the take-out order at a drive-up window or automated ordering device or goes to a counter window inside to order. Orders may also be phoned in and picked up or delivered.
- In fast food establishments, a production line is usually used to prepare orders. Take-out orders are packaged to go.
- Vending machines and automats are forms of automated self-service. For service, the customer inserts coins into a slot in the machine. The food is automatically presented from an opening in the vending machine. For an automat, the door opens allowing the food to be removed.

Words To Know

automat
automated self-service
cafeteria service
quick-service restaurants
runners
self-sufficient back bar
supply workers
take-out service
vending machine

Questions For Review

1. List five types of food service operations that use counter service.
2. What are four types of self-service food service operations?
3. What duties do counter workers perform in addition to service duties?

4. What tasks must be performed to prepare a counter for service?
5. What procedures should be followed in taking and relaying counter orders?
6. Describe the features of a self-sufficient back bar.
7. What food preparation responsibilities are commonly performed by counter workers?
8. What style food service is used for counter service?
9. Who is responsible for bussing, cleaning, and dishwashing in counter service?
10. Why is sanitation especially important for counter service?
11. What tasks must be performed to prepare a cafeteria counter for service?
12. List guidelines to follow for displaying foods for cafeteria service.
13. List guidelines to follow when serving food on a trayline.
14. What are the duties of a runner in cafeteria service?
15. Describe the various responsibilities of the cafeteria dining room attendant.
16. How are customers given their checks in counter service? In cafeteria service?
17. Describe the similarities and differences in cafeteria service and buffet service.
18. What foods are commonly prepared for take-out service?
19. What are the responsibilities of the workers who take orders for take-out service?
20. List guidelines to follow when packaging take-out orders.
21. What is the difference in a vending machine and an automat?

32

Chapter Thirty-two Other Types of Food Service

COMPETENCIES TO DEVELOP

- Set up rooms for catered parties.
- Serve food at customer's table, a seated banquet, or special occasion.
- Pack and transport food, beverages, utensils, and equipment.
- Maintain quality of transported food.
- Unload and deliver food and beverages.
- Serve food and beverages to guests or patients in their rooms.
- Check guests' or patients' needs and supply needed items.
- Pick up food carts, and empty trays from patients, guests, or customers.
- Pick up and return trays, dishes, utensils, and equipment to dishwashing area.
- Prepare artistic food displays for serving lines, buffets, soup and salad bars, and special events.

OBJECTIVES TO ACHIEVE

- Summarize procedures for setting up rooms for special occasions.
- Outline procedures for banquet service.
- Describe equipment and procedures used for packing and transporting food, utensils, and equipment.
- Summarize preparation and services techniques used in catering.
- Outline procedures for preparing, transporting, and serving orders for room service.
- Outline procedures for assembling patient trays.

- Describe procedures for delivering trays to patients.
- Describe opportunities for showmanship when preparing, decorating, and displaying food.

Most food service personnel are employed in restaurants. Others are employed in facilities which use specialized types of service. Some food service establishments provide facilities for serving large banquets. Some cater food for special functions. Food service units serving health care facilities use specialized systems to distribute food to patients and residents. Restaurants in hotels and motels usually provide room service to guests. Some restaurants use showmanship in preparing, decorating, displaying, and serving food. Each of these specialized types of food service require specially trained service personnel.

Banquet Service

Banquet service is provided by many restaurants, hotels, and motels. Institutional food service in schools and hospitals also serve banquets as a service to the institutions and the community.

PREPARING THE ROOM

Preparations for a large banquet begin long before the date of the affair. The customer arranges for a banquet for a certain number of guests on a certain date and selects the menu and style of service. The dining room is assigned based on the number of expected guests and the type of function. The dining room is usually arranged the evening before the event. Two waiters or waitresses or the banquet crew do the work. Instructions for setting up the dining room are provided.

The seating arrangement for banquets must be carefully planned. The plans must ensure that guests will not be crowded. The arrangement should facilitate serving guests quickly and simultaneously. Tables for six, eight, or ten are faster to serve than long banquet-type tables. Workers may be assigned certain tables and are less likely to get in one another's way.

Most rooms lend themselves best to a limited number of arrangements. As a rule, there are certain ways of setting up tables that have been proven to work best. The room arrangement should be based on

- The type of function: banquet, dinner dance, buffet, or reception.
- The number of guests.
- The type of service to be used: formal or informal
- The amount of equipment and the number of servers needed.

- The shape of the room and any obstructions in it such as pillars or posts.

- The presence or absence of a head table and, if used, how many guests will be seated there.

Table arrangements may be created from folding tables of various sizes and shapes. Oblong, round, curved, trapezoid, quarter-round, and half-round tables may be used alone or combined to form a variety of arrangements. Figures 1 and 2 show several ways tables might be arranged.

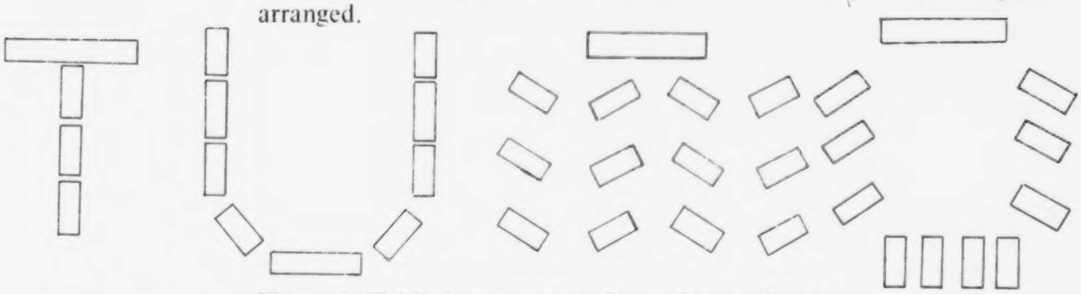


Figure 1: Table Arrangements Using Oblong Tables

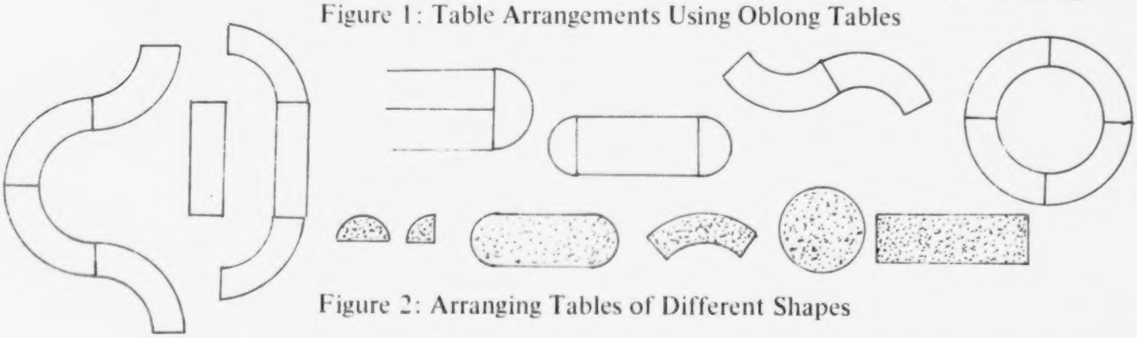


Figure 2: Arranging Tables of Different Shapes

If possible, the head table should be elevated on a platform or ***dais*** (DA' IS). Some establishments use platforms which can be set up to the size needed and then collapse for storage. Raising the head table enables guests at other tables to see the people at the head table.

After the tables are arranged, the tablecloths are laid and the tables are set. The kind and amount of linen, china, glassware, and flatware needed depend on the menu and the style of service.

Large tablecloths are spread more easily by two persons working on opposite sides of the table. If several tables have been put together, it may be necessary to overlap the ends of several cloths to cover the length of the table. Be sure the center fold of each cloth lies straight on the table.

Individual covers should be laid in assembly line fashion. For a very large function, a separate cart might be loaded with each item needed—bread and butter plates, napkins, knives, forks, and so on. One person would be responsible for laying a single item at each place. Salt and pepper shakers, ash trays, sugar or sweetener stands, and creamers should be placed where they are convenient to every guest.

Service facilities usually include service stands and tray stands. Service stands hold supplies, breads, beverages, and other needed items. Stands for large trays are placed conveniently throughout the dining room.

SERVING BANQUET STYLE

Banquets are usually served using either American or Russian style service. American is used more often because it is less formal and requires fewer service personnel.

In ***American banquet service***, the banquet tables are completely set in advance. All cold foods such as water, butter, bread, appetizers, and salads are placed on the tables before the meal begins. Hot foods are served on heated plates in the kitchen. The plates are covered with metal covers. The covered plates are carried on large trays to tray stands. The covers are removed, and the plates are placed before the guests. All dishes are served and removed from the left, except beverages.

Russian banquet service is more elaborate and formal. Because the menu is more elaborate, the place settings are more complicated. Dinner plates are placed on each guest's cover when the table is set, as in regular Russian service. The food is brought into the dining room on silver platters that hold 6 to 10 portions. Each guest is served individually.

In all banquet service, service must be carefully coordinated. Waiters and waitresses serve and clear each course at the same time, as signaled by the headwaiter or hostess. The head table is always served first. Buspersons may carry trays from the service room to the service stand or tray stand. Extra service personnel called ***floaters*** may be used to pass rolls, relishes, and butter and to serve beverages. The teams of waiters, waitresses, buspersons, and floaters work together to ensure that each course with all its accompaniments is served at all tables at the same time.

Catered Service

Catered service provides food and service personnel for social and business functions. The functions may range from birthday parties to wedding receptions to club meetings to business and community events. The person who provides catered service is called a ***caterer*** (KA ter er). The caterer may operate from a home kitchen, a restaurant, or a separate business.

Catering is a very adaptable form of food service. A catering business is different than a restaurant operation. Unlike a restaurant, it is not confined to a particular location, menu, or schedule.

The caterer provides food and service wherever it is needed—either indoors or outdoors. The location may be a private home, a club, a hall, or a city park. Some caterers prepare food in the client's own home. This is called ***accommodator service***. Some caterers have dining room facilities which may be used by groups. This type of catering is called ***on-premises catering***. Transporting food to another location is called ***off-premises catering***. The caterer may even contract to provide food to remote sites using a specially equipped vehicle. This type of catering is called ***mobile unit catering***.

The food ordered is usually for a special occasion like a wedding, club meeting, or business entertaining. Customers may choose from individual food items or a wide selection of menus. They may also select the type of service they want like buffet service or table service.

TRANSPORTING FOOD AND BEVERAGES

Caterers usually prepare food for a function in their own kitchens. It is transported in special insulated containers which help to keep the food at the correct serving temperature. Table linens, flatware, dishes, and glassware are often provided as well. A ***packing list*** is used to ensure that all needed items are transported to the catering site.

Before the catered event, the dining area must be set up. Folded tables must be unfolded and positioned. Stacked or folded chairs must be placed. Tablecloths must be spread and covers laid. The procedures for arranging and setting the tables are similar to those used for banquet service. Off-premises caterers will have to make improvised service stands using small tables.

The details of serving will depend on the type of function, the menu, and the desires of the customer. Trayline, buffet, table, or banquet service may be offered. The general rules for each type of service were discussed earlier. These rules apply to catered service as well.

Tray Service

Tray service is usually offered in hotels and motels, in hospitals and nursing homes, in some drive-ins, and on airplanes. In hotels and motels, ***room service*** allows guests to place their orders from a special room service menu. Room service may be available for breakfast, lunch, dinner, beverages, and snacks. Room service is provided in hospitals and nursing homes when patients are not able to leave their rooms for meals. In both instances, the food is prepared in the kitchen and transported to the individual's room. Some drive-ins provide ***car service***. The customer's order is delivered to the car on a tray. ***Passenger tray service*** provides trays of food for airplane passengers during flight.

HOTEL/ MOTEL ROOM SERVICE

In hotels and motels, room service may be offered by one or more restaurants in the facility. When the guests order from their room it is received by the service clerk or captain, and then is relayed to the appropriate food stations in the kitchen.

The tray or table is assembled by the room service waiter or waitress while the food is prepared. The food is covered with a clean cloth or lid. The required number of place settings and appointments are assembled and arranged on the tray or table. Flowers may be added for a special touch. Cold food items are collected and placed on the tray or table. Hot foods are placed in heated, covered dishes or carriers and placed on the tray or table. ***Canned heat*** or warmers may also be used to keep hot foods hot. A large cover may be placed over the entire tray or table.

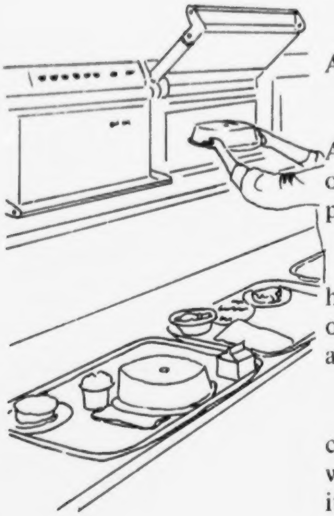
When the order is complete, it should be checked for accuracy. Then it is taken to the guest's room. If several trays are being served at the same time, a cart with tiers is used.

At the guest's room, the waiter or waitress should knock on the door and announce, "Room service." When the guest opens the door, the guest should be greeted and the tray or table placed as directed. Covers should be removed and the table set for the guest. Iced water, coffee, and hot foods may be served or guests may prefer to serve themselves. Before leaving, the check is presented for signature or payment. An appropriate time for picking up the tray may be arranged.

After the meal is finished, the guest may leave the tray in the room or call room service and ask that the tray be picked up. If the tray is not picked up before the room is made up, it will be placed outside the door of the room. Room service trays should be picked up promptly as they are unappealing to guests.

HOSPITAL ROOM SERVICE

Hospitals and larger nursing homes prepare patients' food trays on an assembly line. The trays are then sent to the appropriate areas for serving patients who cannot go to a dining room to eat.



Assembling Trays

Trayline workers are assigned to handle specific food items or jobs. As trays move to their positions, workers read the individual ***diet orders*** or menus carefully and assemble the items on the trays in the correct position.

The completed tray includes the tray cover, napkin, and flatware. It has the hot and cold foods, beverage, and dessert specified on the diet order. It has salt (or salt substitute), pepper, bread, butter, cream, and jelly as directed.

When the tray is complete, it is checked for accuracy by a food checker. The ***food checker*** is usually a more experienced trayline worker. The food checker checks each menu item on the tray to be sure it matches the diet order.

Delivering Trays

After the trays are checked, they are transferred to portable carts designed to keep foods at the proper temperatures. The food is then delivered to the designated floor. Foods which need to be prepared immediately before serving, like toast, are prepared on the floor where the tray was delivered. These foods are added to the trays and then the trays are served to the patients.

CAR SERVICE

In car service, beverages and food are served on trays to customers in their cars by ***carhops***. Depending on the establishment, the carhop may go to the customer's car and take the order, or the customer may order through an automatic speaker system. After the order is prepared in the food preparation area, the carhop delivers the order on a tray to the customer. Dirty dishes are left on the tray and collected by the carhop.

AIRPLANE SERVICE

In passenger tray service, food is prepared in the flight kitchen and transported in refrigerators and warmers. Special food must be ordered by passengers several hours prior to the flight. Food is stored in insulated containers until serving time. The flight attendants carry the trays of food to the passengers and remove the trays when the passengers have finished eating.

Food Showmanship

Food showmanship includes the preparation, display, and service of food with a flair. Food showmanship may be part of the service in exclusive restaurants.

COOKING AND FLAMING IN THE DINING ROOM

Most foods that are cooked or ***flamed*** in the dining room would be as good prepared in the kitchen, but showmanship attracts customers and whets their appetites.

Cooking in the dining room demands real professional skill. Showmanship is not enough. In addition to the right serving technique, the waiter or waitress needs food preparation experience. Most dishes prepared in the dining room require at least two individuals—one to serve and set up, and the other to do the preparation. Waffles, omelets, and steaks are examples of foods which may be prepared in the dining room. Some restaurants featuring Japanese food prepare the entire meal in the center of a special table and serve it to customers seated around the edge. A steak restaurant may grill steaks in view of customers.

Flaming is a fairly simple technique with a spectacular effect. Specialty coffees, fruit desserts, ice cream desserts, crepes, steaks, and lobsters may all be flamed. The basic equipment required includes a chafing dish with at least two pans, silver ladles and serving implements, and an extra chafing dish which is set up to keep foods hot.

Some foods may be more easily prepared in the dining room than others. Coffee service and flamed fruit and crepes are among the easier foods to prepare in the dining room. Actually cooking or finishing preparation of foods in the dining room is more of a challenge.

DECORATING FOOD

Another type of showmanship is exhibited through the use of decorated food. Food decorations add to the appeal of the food. Decorations range from simple garnishes to elaborately decorated cakes.

Edible centerpieces can be most attractive as the focal point on the buffet. They may be made of fruits and vegetables alone or combined with floral arrangements.

Ice carvings and tallow work also make spectacular additions to a buffet or banquet table. These delicate carvings made of ice or ***tallow*** (fat) may be used alone as a centerpiece, or as a container for food that must be kept cold. Ice carving and tallow work require practice and experience. A variety of shapes ranging from hearts, birds, fish, flowers, and ships to boots and spurs may be created.

SERVING SPECIAL FOODS

Special occasion foods often require special serving techniques. Among these foods are tea and coffee, punch, cake, and hors d'oeuvres and canapes.

Coffee and Tea

For special occasions, a silver coffee or tea service may be used. A separate table may be set up for hot coffee and tea. Guests may be allowed to serve themselves or a server may pour the beverage.

Punch

Punch is a popular beverage choice for receptions and parties. Punch is served from a silver, glass, or plastic punch bowl. The punch bowl may be set on a matching tray, or in a ring of greenery, fruit, or flowers. A decorative ice ring is sometimes floated in the punch bowl. Fruit or flowers frozen in the ice ring may add a festive note.

The proper equipment and arrangement makes punch easier to serve. The punch is poured with a punch ladle. The ladle is usually slightly curved and long enough to extend over the edge of the punch bowl to prevent it from slipping into the bowl. The pouring lips of the punch ladle are located on the side of the ladle to make pouring easier. Punch cups may be arranged around the bowl, to one side, or on a tray to one side.

Punch must be served with care. Pick up a cup by the handle. Using the punch ladle, pour punch into the cup. Pour slowly to avoid splashing and spilling. Fill the cup one-half full. Return the ladle to the punch bowl, switch the cup to the other hand, and serve the punch to the guest. Be sure the handle of the cup is turned toward the guest. Never fill punch cups far ahead of time. Fill a few punch cups at a time.

Do not remove the punch bowl from the table to refill it. Refill the punch bowl from pitchers of punch brought from the preparation area. The pitchers should be as attractive as the other table appointments. Avoid splashing the punch when pouring it into the punch bowl.

Cakes

Cakes add a festive note to special occasions and are a popular dessert. Food service personnel may be asked to serve cake for a catered affair, a private party, or for customers' or patients' birthday and anniversary celebrations. In some restaurants, service personnel sing "Happy Birthday" as the cake is delivered to the customers' table. At a birthday party, the honored guest blows out the candles and makes the first cut in the cake and then the server cuts and serves the cake. At a wedding reception, the bride and groom, holding the knife together, make the first cut into the cake. After photographs are made, the caterer's staff cut and serve the cake. Techniques for cutting and serving different types of cakes are described in Chapter 25, Cakes and Icings.

Hors d'oeuvres and Canapes

Hors d'oeuvres and canapes are often served as the main food at special parties and receptions. The appetizers are prepared and arranged on trays, plates, and other serving dishes in the kitchen. The appetizers should be prepared on duplicate serving pieces so when one is removed, it can be replaced with another like it. This helps keep the table uniform and appealing.

The number of trays and serving pieces should be compatible with the size of the table. To limit the number of serving pieces needed, several different items can be arranged on each tray or plate. The table is more attractive when serving pieces of different sizes and shapes are used.

Replenish appetizers frequently. Do not let the food dwindle to one or two appetizers on a tray. Do not refill the serving piece at the table. Remove the tray or plate from the table and replace it with the duplicate tray prepared in the kitchen. Return the empty or nearly empty serving piece to the kitchen.

At some functions, service personnel serve appetizers directly from the preparation area. A tray of appetizers is carried among the guests. The server offers the appetizers to individuals or small groups of guests, circulating among them without neglecting anyone or becoming a nuisance.

Trays of appetizers should be checked as they are picked up from the preparation area. The food should be attractively arranged and the garnish should be fresh. The appetizers should not appear crowded. Guests should be able to remove an appetizer from the tray without touching another one.

Points To Remember

- Banquet service, catered service, tray service, and food showmanship are speciality types of food service.
- Preparations for a large banquet begin long before the date of the affair. The customer arranges for a certain number of guests on a certain date, selects the menu, and selects the style of service in advance.
- The seating arrangement for banquets must be carefully planned. The arrangement should facilitate serving guests quickly and simultaneously. Tables for six, eight, or ten are faster to serve than long banquet-type tables. If possible, the head table should be elevated on a platform or dais.
- Banquet tables are covered with tablecloths and individual covers are laid assembly line fashion. Banquets are usually served using either American or Russian style service.
- The head table at a banquet is always served first. Teams of waiters, waitresses, bus persons, and floaters work together to ensure that each course with all its accompaniments is served at all tables at the same time.
- Catering is a very adaptable form of food service. The caterer may operate from a home kitchen, a restaurant, or a separate business, and may provide food and service wherever it is needed. The food ordered is usually for a special occasion like a wedding, club meeting, or business entertaining. Trayline, buffet, table, or banquet service may be offered.
- Catered food is transported in special insulated containers that help keep the food at the correct serving temperature. Table linens, flatware, dishes, and glassware are often provided. A packing list is used to ensure that all needed items are transported to the catering site.
- Room service allows hotel and motel guests to place their orders from a special room service menu. Room service waiters/waitresses should follow appropriate procedures for assembling and delivering trays, serving food and beverages, presenting the check, and picking up trays.

- Tray service is usually offered in hotels and motels, in hospitals and nursing homes, in some drive-ins, and on airplanes.
- Diet orders for each individual patient are followed in hospital and nursing home tray service. When a tray is assembled it is carefully checked by a food checker.
- Food showmanship involves cooking and flaming in the dining room, food decorating such as ice carvings and edible centerpieces, and serving special foods such as punch and hor d'oeuvres.

Words To Know

accommodator service
American banquet service
canned heat
car service
carhops
catered service
caterer
dais
diet orders
flamed
floaters
food checker
food showmanship
mobile unit catering
off-premises catering
on-premises catering
packing list
passenger tray service
room service
Russian banquet service
tallow
tray service

Questions For Review

1. When preparing for a large banquet, what information must the food service establishment obtain from the customer in advance of the affair?
2. List six factors that affect room arrangement for a banquet.
3. What guidelines and procedures should be followed by food service workers in laying tablecloths for a banquet?
4. Describe the procedure for setting covers for a banquet to be served American banquet service.
5. Describe the procedure for serving food in American banquet service.
6. How does Russian banquet service differ from American banquet service?
7. What is the difference in accommodator catering service and off-premises catering service?
8. List three occasions discussed in this chapter that might typically be catered.
9. What procedures should be followed in transporting food, beverages, supplies, and equipment to a catered function?

10. List four types of service discussed in this chapter that may be offered by caterers.

11. What are the procedures to be followed by waiters and waitresses in providing hotel/motel room service?

12. What procedures should be followed for assembling, checking, and delivering patient food trays in hospitals and nursing homes?

13. What procedures are followed and how many workers are needed to cook one food speciality in the dining room in view of guests?

14. List four foods that are suitable for flaming.

15. List three ways to exhibit food showmanship by use of decorated food.

16. What procedures should be followed for replenishing a punch bowl?

17. What procedures should be followed for assembling trays of canapes and hor d'oeuvres and for replenishing them at a serving table?

33 Chapter Thirty-three
Money Handling

COMPETENCIES TO DEVELOP

- Itemize and total price of each order.
- Present check to customer and accept payments or refer customers to cashier.
- Handle payments (cash, checks, credit cards), operating a cash register, making change, and writing receipts.
- Prepare cash drawer.
- Prove cash, and prepare deposits.
- Give tips to proper waiters/waitresses.
- Display, sell, order, and restock counter items.

OBJECTIVES TO ACHIEVE

- Describe the procedure for computing the check.
- Describe the procedures for presenting checks to customers.
- Cite procedures for accepting personal checks and credit cards.
- Summarize the procedure for making change.
- Cite procedures for setting up and using a cash register.
- Summarize procedures for verifying cash on hand.
- Cite guidelines for handling tips.
- Describe the cashier's responsibilities for counter items.

The main purposes of a commercial food service establishment are to serve customers and to make a profit. Therefore, both human relations' skills and mathematical skills are needed by almost every employee in a food service operation. The duties of a food service employee often include computing the check, presenting the check, handling money, and making change.

Computing The Check

Each food service establishment has specific rules for employees to follow when computing the customer's check. ***Computing the check*** means to figure and total the charges. Totaling the charges may be done by the waiter or waitress, counter person, cashier, checker, or a computer. The charges to be computed include menu items, cover charges, sales tax, special services, and extra charges for refills. A gratuity (tip) charge is computed on the customer's check in some restaurants.

Most food service establishments have a tax table for employees to use when figuring the sales tax on a customer's check. The ***tax table*** shows the amount of tax to be added to the check. To figure sales tax without the tax table, the employee should multiply the subtotal on the check by the amount of the ***sales tax*** (different for different states in the U.S.) to find the amount of tax for the check. The ***subtotal*** is the amount of the check before the tax has been added. Then the amount of the tax is added to the subtotal to find the total amount of the check. For example:

STEP 1: Figuring the Tax

Subtotal = $10.20
Sales tax = x.05
Tax total = .51 00

STEP 2: Adding the Tax

Subtotal = $10.20
Sales tax = +.51
Check total = $10.71

Accuracy is very important when computing the check. To make certain the computed charge is correct the check should be totaled carefully, uncertain prices should be checked against a menu, and the addition rechecked.

When a mistake is found on the check, the error should be marked through rather than erased. Erasures can look suspicious to those checking records when money is involved. Checks, regardless of mistakes found, should never be destroyed. Illegible checks should be discussed with a superior to learn the policy of the food service establishment. Since most check pads are numbered and a careful count made to see that all checks are returned, a missing check can cast suspicion of theft on the employee.

Presenting The Check

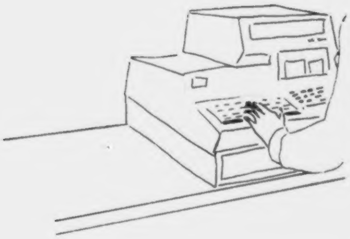
It takes a real diplomat to present a check to a customer tactfully. Both the food service employee and the customer can be embarrassed if the check is not presented gracefully and diplomatically. In some food service establishments when the seated customers have finished their meal and indicated they do not want anything more, the check should be completed away from the serving area, and then presented to the host. When uncertain as to who the host is, or if there are several checks for one table, the check or checks should be placed face down near the center of the table.

Respect the wishes of an individual who indicates he or she will be paying the check. Some businesswomen prefer to leave the table to pay the check or to make some other arrangement when entertaining male associates or clients. If the guest is to take the check to the front of the restaurant and pay the cashier, the check should be placed face down on the table to the host's right. The guest should be thanked and and a brief remark made to let the customer know they are to pay the cashier.

In many food service establishments the check is presented face down on a ***check tray*** (a small tray with raised sides). After the host places the payment on the tray, the food service employee should take the tray, check, and payment to the ***cashier*** who is responsible for making correct change. Then the food service employee returns all the money on the tray to the host, thanks the customers and invites them to return.

The policy of some restaurants is for the customers to pay the waiter or waitress rather than the cashier. The food service employee takes the money and the check to the cashier or cash register, checks that the change received is accurate, and returns the change and receipt to the customer. The food service employee should stand to the left of the customer, count the change back to the customer, thank the customer, and invite the customer back.

In most fast food businesses the customers pay for their food when placing an order or when picking up an order phoned in. The food service employee should make change quickly and accurately and follow any additional procedures the employer requires for handling money.



In cafeteria restaurants, a cashier handles the money. In most cafeterias a checker located at the end of the food line scans each tray; tabulates the food items, prices, and taxes; makes a notation on the check of the number of customers covered on the check; and gives the check to the customer. On completion of their meal, customers take their checks to the cashier, usually located near the exit. The cashier rings up the sale on a ***cash register***, and returns change.

Some cafeterias, including school cafeterias, may have more than one food line and one or more checker/cashiers at the end of the food lines. The checker/cashier tabulates food items, prices, and taxes; rings up the sale; takes money, school tickets, or coupons; and makes change.

A restaurant offering a smorgasbord with a specific price for the meal being served may have the customers pay the cashier before they select their food. Other restaurants have the waiters and waitresses list the buffet on the check and the check is handled the same as for other orders in the food service establishment.

Since customers often pay their checks with credit cards, employees should know which credit cards are accepted by the food service establishment where they are employed. Common policies for handling credit cards are listed:

- Check that the credit card is signed by the cardholder.
- Check the credit card's expiration date.
- Search the "hot card" list or call to verify.
- Place the card in the stamping machine with the credit slip on top and slide the bar over both to imprint the slip.
- Complete the credit slip by listing food items or meals, tax, and bar total on the slip according to employer's policy.
- Total the amount.
- Return the card, credit slip, and a pen to the customer for signature. (Cardholder may want to add a tip at this point.)
- Compare customer's signature with the one on the credit card to be sure they are identical.
- Return the customer's credit card, customer's copy of the credit slip, and offer the carbon paper.
- Place the "original" of the credit slip in the cash drawer.

Some customers will want to pay their checks with personal checks. The policies of the food service establishment should be closely followed. Traveler's checks should be countersigned in the presence of the food service employee and are usually honored in food service establishments when presented with the required identification.

Making Change

The ability to make change is a skill needed by many food service employees. Change should be counted and checked for accuracy as soon as it is received from the cashier or cash register. Count out loud as the change is handed to the customer. The amount of the sales check and the amount of money received (e.g., "$2.20 out of $5.00") should be repeated. Count up from the smallest coin to the largest bill (e.g., "$2.25, $2.50, $3.00, $4.00, and $5.00") as the change is handed to the customer. When using a cash register to make change, place the money received on the shelf of the cash register in full view of the customer. The check showing the amount of the sale should be placed beside the money. The amount of the sale is the starting point for counting back change.

Using a Cash Register

The responsibilities of a food service employee may include opening the cash register at the beginning of the day or shift. The starting cash in the ***cash drawer*** should be counted to make sure the correct amount is in the cash drawer. The starting cash in the cash drawer is used as change for customers.

At the end of the day it may be the duty of the food service employee to close the cash register. When closing the cash register most food service establishments will want a cash register report prepared to prove cash or balance. The cash register report shows the amount of money received, the amount of money paid out, and the total amount of sales during the day or shift.

To close the cash register and prepare the cash register report, the food service employee should follow the steps below.

1. Determine cash in drawer.
    - Count each denomination of $50, $20, $10, $5, $2, $1 bills and list the total for each.
    - Count each type of coin (half dollar, quarter, dime, nickel, penny) and list the total for each.
    - List all checks and record the total.
    - List all credit card slips and record the total.
    - Total the amount of cash and checks in the cash drawer.

2. Determine cash paid out.
    - List all cash vouchers and write down the total.
    - Total cash paid out.

3. Determine total cash sales.
    - Add cash in drawer total to cash paid out total.
    - Subtract starting cash in drawer.

4. Check that the total on the cash register tape is the same as the total cash from sales. (When the amount of money in the cash drawer at the end of a day or shift is more than the amount of sales on the cash register tape, it is referred to as ***cash over***; when the amount in the cash drawer is less than the sales on the cash register tape it is ***cash short***.)

5. Sign the cash register report.

6. Put all the money and receipts in a moneybag and give it to the manager or supervisor according to the policies of the food service establishment. If a bank deposit is to be made, it should be made in duplicate so the carbon can be kept for records at the food service establishment.

The cash registers in food service establishments will vary. Many cash registers automatically figure the correct change. Some of the cash registers show the correct amount of change the customer is to receive immediately after the employee rings up the sale. Other cash registers automatically return the change through a change chute to the customer.

Handling Tips

A ***tip***, or gratuity, is the amount of money given in return for a service. Usually the more prompt and courteous service the customer receives, the larger the tip the food service employee receives. The amount of the tip is also influenced by the customer's attitude toward tipping and whether or not the customer was satisfied with the meal.

Most people figure a tip at 15 to 20 percent of the total check depending on the service received and the type of restaurant. Many food service establishments automatically add a gratuity charge to the check. If this is the policy, and even if it is stated on the menu, the food service employee should tell the customer before taking the order. A customer who does not understand that the gratuity has been added may leave a tip at the table, and be upset over prices higher than anticipated.

Customers sometimes ask the waiter or waitress to figure 15 percent of the total check or the gratuity for them. A fast and easy way to figure the gratuity at 15 percent is to find 10 percent of the check by moving the decimal point in the total one place to the left. Take one-half of that figure. Then, add the two figures together to get the amount of the tip. For example to find 15 percent of a check for $12.00:

10% of $12.00 = $1.20 (move decimal point one place to the left)

1/2 of $1.20 = $ .60

$1.20 + $.60 = $1.80 (amount of gratuity)

If tax is 5 percent, gratuity can quickly be figure by multiplying the amount of tax by 3 (Example: .60 x 3 = $1.80).

Food service employees should observe the following guidelines when accepting tips:

- Don't stay at the table waiting for a tip.
- Smile and thank the customer for a tip.
- Collect the tip and go on with other tasks.
- Do not count or talk about your tips in dining area.
- Do not discuss with customers what others tip you.
- Give customers who do not tip the same service as customers who tip.

In most food service establishments, the waiters and waitresses receive tips directly. In others, the tip is collected through a gratuity added to the customer's check and then divided between waiters, waitressess, carhops, etc., depending on the situation.

Under the ***Fair Labor Standards Act*** (1973), known as the wage-hour law, food service employees working in an establishment grossing more than $250,000 a year must be paid a minimum wage. Businesses established after 1981 must make at least $362,000 to be covered. Establishments that do no meet the minimum gross amounts, do not have to abide by the Fair Labor Standards Act. The wage-hour law defines a tipped employee as one who regularly receives more than $20.00 a month in tips. When the employer collects all tips as part of the gross receipts, the employer must pay the full minimum hourly wage. If the policy is for the employee to keep all tips, the amount of the tips is deducted from the wages. The amount deducted for tips cannot exceed fifty percent of the minimum wage rate.

Food service employees receiving more than $20.00 in tips each month must file Form 4070, ***Employee's Report on Tips***, with their employer. The employer uses the information to figure the amount of social security and income taxes to withhold from the employee's pay check. The form must be filled out monthly so it is necessary for the food service employees to keep an accurate record of tips received. Daily recording of the tips received will help to ensure accurate records. Food service employees are required by law to report the total amount of tips received on their federal income tax return.

Managing Counter Items

In most commercial food service establishments prepackaged items like candy, gum, and mints are displayed for sale at the cash register counter. Newspapers, cigarettes, small packaged toys, and common over-the-counter medicines, such as aspirin and antacids, may also be at the counter. Counter items are sold by any employee who takes guests' payments for meals. In some establishments, counter items are dispensed from vending machines in the counter area. Toothpicks are often provided at the counter at no cost to the customer. Toothpicks may be available from a dispenser or individually wrapped in cellophane.

The head cashier is usually responsible for ordering, inventorying, and restocking counter items. These responsibilities are usually independent of similar back-of-the-house ordering and receiving operations. The cashier has direct contact with vendors and is responsible for seeing that counters and vending machines are well-stocked at all times.

Points To Remember

- Compute the customer's check by figuring and totaling the charges which include menu items, cover charges, sales tax, special services, extra charge for refills, and sometimes the gratuity.
- Figure the sales tax by multiplying the subtotal on the check by the amount of the sales tax.
- Figure the total amount of the check by adding the amount of the sales tax to the subtotal.
- The check should be figured away from the serving area and presented face down on the table to the host's right when the customer is to pay the cashier; when uncertain as to who the host is or when several checks are for one table, checks should be placed face down near the center of the table.

- The check is presented face up when a check tray is used.
- The customer's signature and needed information should be checked for verification when personal checks or credit cards are presented.
- Change should be counted and checked for accuracy as soon as it is received from the cashier or cash register.
- Count change back to the customer by repeating the amount of the sales check and the amount of money received and then counting up from the smallest coin to the largest bill.
- At the beginning of the day or shift, the cash register is opened and the cash in the cash drawer is counted; at the end of the day or shift, the cash register is closed and cash proved or balanced.
- Cash on hand is verified by preparing a cash register report to determine cash in drawer, cash paid out, and total of cash sales.
- When accepting tips, smile and thank the customer, collect the tip and go on with other tasks; avoid counting or talking about tips in the dining room; avoid discussing with customers what others tip; give customers who do not tip the same service as customers who tip. The food service employee should avoid staying at the table waiting for a tip.
- The head cashier is uaually responsible for ordering, inventorying, and restocking counter items.

Words To Know

cash drawer
cash over
cash register
cash short
cashier
check tray
computing the check
Employee's Report on Tips
Fair Labor Standards Act
sales tax
subtotal
tax table
tip

Questions For Review

1. What are the two main purposes of a commercial food service establishment?
2. What are two basic skills needed by food service employees?
3. What are four money handling tasks performed by food service employees who serve customers?
4. When totaling a customer's check, what charges may be included? List six possible charges.
5. If a tax table is not available, what steps should be taken to figure the tax and include it in the total?

6. What procedure should be followed if an error is made on a check?
7. Discuss the guidelines for presenting checks for table service.
8. Explain the roles of the checker and the cashier in cafeteria service.
9. What are the common policies for handling credit card payments?
10. What are the procedures for accepting traveler's checks?
11. What are the correct procedures for accepting cash and making change? Give an example.
12. What is the correct procedure for opening a cash register at the beginning of the day?
13. List the steps in closing the cash register at the end of the day. Give the procedures to follow for each step.
14. What guidelines should be followed in accepting tips?
15. Describe a fast and easy way to figure a 15 percent gratuity.
16. What are the provisions of the Fair Labor Standards Act regarding tips?
17. What items are commonly sold at the cash register counter?
18. What responsibilities may the cashier have for items sold at the cash register counter?

34 Chapter Thirty-four
Management Responsibilities

COMPETENCIES TO DEVELOP

- Describe personal qualities which lead to job success in food management, production, and services.
- Develop, evaluate, and implement organizational goals, policies, and procedures in the operation of food service.
- Interpret and comply with laws and statutes pertaining to food service establishments.

OBJECTIVES TO ACHIEVE

- Identify desirable traits needed by a successful food service manager.
- Evaluate the food service operation in terms of organizational goals, policies, and procedures.
- Propose organizational goals, policies, and procedures appropriate for food service operations.
- Determine methods for effective utilization of appropriate goals, policies, and procedures in food service operations.
- Identify laws and statutes most related to food service operations.
- Identify ways to comply with laws and statutes pertaining to food service establishments.

Being a food service manager can be an interesting and varied job. A manager of a food service operation is involved with many tasks such as menu design, food purchasing, bookkeeping and payroll, coordination of work schedules, and customer satisfaction.

As a food service employee, you can reach the managerial level in several ways. You may work your way up within an organization, enter a management training program, or take college of trade school courses in hospitality or business management. Before you set food service management as your career goal, learn all you can about the duties and responsibilities of food service managers. The experience you gain as a food service employee will provide excellent background for becoming a manager.

The food service manager must learn and supervise every aspect of food preparation and service. Food service managers assume a variety of management level responsibilities. ***Management*** means getting work done when and how you want it done through others. This definition should tell you that food service managers must have excellent skills in many areas of food service and must also have certain traits.

Desirable Traits

A successful food service manager exhibits many of the traits listed below:

- ability to work with other people, including those from other cultures and socioeconomic levels.
- be responsible, trustworthy, and dependable.
- ability to work without supervision.
- ability to read, write, and speak well.
- appreciate good food.
- maintain high standards of neatness and cleanliness.
- be healthy.
- be enthusiastic and creative.
- ability to set goals and develop ways to achieve these goals.
- ability to organize your work, make decisions, and accept your mistakes and learn from them.
- be loyal and willing to observe company policies.
- be willing to devote the long hours required in food service.

Food service today is highly competitive. The food service manager plays a critical role in the success of a food service operation. While it's desirable to naturally possess the above traits, many of them can and must be developed to be a good food service manager.

Organizational Goals

Every successful food service organization works through its employees. The key to this success is the work of an effective food service manager who is able to establish ***organizational goals***. These are objectives that the food service operation wants or needs to meet to be financially successful. The goals of the organization will change with time. The organizational goals of new, struggling restaurants are different from the organizational goals of an established, financially stable restaurant.

In general, every food service operation should have the following organizational goals:

- financial stability and success.
- compliance with local, state, and federal regulations.
- good employee relations.
- high levels of food quality and sanitation.
- plans for the future of the business.
- customer goodwill and good customer relations.

Policie's and Procedures

Organizational goals are stated in broad, global terms such as "customer goodwill and good customer relations." To help achieve organizational goals, policies and procedures are developed. Specifically, ***policies*** provide guidelines for operation; ***procedures*** provide the method or the means by which policies are carried out. Policies and procedures are the small steps that lead toward reaching organizational goals. They also help keep the food service operation in compliance with many laws and regulations.

POLICY AND
PROCEDURES
MANUAL

Policies and procedures are usually written and placed in a type of reference book called a ***Policy and Procedures Manual***. By doing this, the various policies and procedures are clearly communicated to employees, regulating agencies, and other interested people. The manual can be referred to quickly when a question arises. Most of all, a written policy and procedures manual adds direction to the total organization.

DEVELOPING POLICIES AND PROCEDURES

Policies and procedures are permanent and inflexible. Before new policies and procedures are established, the food service manager should review the following questions:

- Is the new policy/procedure fair to the employees and the organization?

- Does the new policy/procedure conflict with existing policies and procedures?

- In terms of cost efficiency and employee morale, what is the potential impact of the new policy/procedure?

- Will the new policy/procedure solve the identified problem or does it only touch on the symptoms of a deeper problem?

- Will the new policy/procedure be suitable for future situations of a similar nature?

Policies and procedures are distinguished from regular, routine managerial decisions by their permanence. When new policies/procedures are adopted, or old policies/procedures are dropped, the food service manager should take great care that all employees are notified.

The number and types of policy/procedure decisions made by a food service manager are numerous and varied. In general, policies deal with wages, vacations, holidays, personnel, customers, and food service operations. If the food service manager is also the owner of the establishment, then it is his or her responsibility to determine policies. Otherwise, policies may be made by the owners alone, or in cooperation with the food service manager.

Because procedures determine or identify the way in which policies are carried out, it is important that procedures, like policies, are in keeping with the nature and goals of the organization. For procedures and policies to be enforced, they should be assigned according to roles or personnel titles.

ESTABLISHING POLICIES AND PROCEDURES

When you are responsible for establishing goals, policies, and procedures, the decisions you make should be carefully considered. Organizational goals are generally stated in broad terms. For the broad organizational goal to be achieved, it must be broken down into smaller, measurable steps. For example, the food service operation may have an organizational goal of "financial stability and success," but objectives such as "increase profits by 20 percent during the next 12 months" clearly define what will be done to meet the larger, organizational goal.

Establishing policies and procedures is done in much the same way as setting organizational goals. The food service manager may want a policy that says "all employees will be paid a fair living wage." To develop a policy that is understood by employees and is enforceable, the policy might be stated "Wages for the following employees are established as the minimum entry-level wage: Dishwasher $3.45/hr., Fry cook $3.55/ hr., etc."

PLANNING

The steps described in the last two sections are the initial stages of the managerial process known as planning. Planning involves the identification of goals, objectives, or problems and the making of choices with regard to the course of action chosen. Once choices are made, they are then organized into an effective procedure. The planning process requires the following objectives be met:

- Identify each objective in clear, concise, measurable terms. When trying to solve a problem, be sure you have identified the true, core problems and not merely the symptoms.

- List all the different ways you can think of to solve the problem or meet the objective.

- For each possible solution, list all of the possible outcomes (good and bad).

- Carefully consider each alternative and its possible outcomes.

- Choose the alternative which most effectively meets the stated goal, is fair to both the employer and employees, is consistent with the other goals of the organization, and complies with local, state, and federal regulations.

By carefully working through the planning process the food service manager is able to develop a policy. This process will include what task is to be done, when it is to be done, by whom it is to be done, and who is responsible for seeing it is done.

Once through the planning process, a food service manager needs to develop a step-by-step procedure for implementing the chosen alternatives. This will help the food service manager visualize just how the policy and procedure are to be implemented. Taking this step-by-step route reduces the possibility of developing a policy that does not meet the objective or is unfair to employees.

Often food service managers confronted with a problem immediately assume that what is needed is a new policy and/or procedure. The natural reaction is to think, "A new problem, a new rule." Eventually, the organization becomes overburdened with policies and procedures. Many of these overlap or duplicate efforts. This type of management confuses employees as to the correct way to do things or it strangles the organization, restricting creativity and communications. Therefore, it is important that policies and procedures are carefully thought through and well-designed *before* they are implemented.

UTILIZING ORGANIZATIONAL GOALS, POLICIES, AND PROCEDURES

The key to utilizing a food service operation's goals, policies, and procedures effectively is employee involvement. ***Employee involvement*** is the active participation of employees in the identification of goals and the development of problem-solving techniques. Employees are asked to identify areas of the business which may be causing problems, such as a poorly designed menu that is unappealing to customers, and to suggest ways in which the problem could be solved. Problem-solving may not always lead to the development of a new policy or procedure. More importantly, employees are made aware of the many factors affecting the success of the business and the problems faced by the food service manager. When employees are actively involved in developing ways to make the business successful, they feel more responsible for making things work smoothly. Also, employees take pride in knowing that they and their opinions are valued by their employer. Employee involvement gives the employees a sense of "ownership," and a feeling that they can make a difference in how successful the food service operation is.

Another aspect of employee involvement is the clear communication of goals, policies, and procedures from employer or manager to employee. When employees clearly understand what is to be done, what acceptable behavior is, and what the goals of the organization are, it is much easier for them to work to help the organization run smoothly and successfully. Problems often arise when employees are not told what "the rules are" or when management forces a new policy on employees without first talking with employees about it.

Because of the vital role that effective communications play in the success of a food service operation, food service managers should work hard to develop honest, open lines of communication with employees. If employees' advice or ideas are requested, they should be seriously considered. If advice or ideas are not accepted or implemented, the food service manager should explain why they were not used. Employees often feel used when management says it wants employee involvement in management decisions and then ignores the suggestions offered.

Laws and Codes Related to Food Service Operations

Many policies and procedures are designed to help the food service operation comply with local, state, and federal laws. While many of these laws pertain to all types of businesses, some laws are more related to food service establishments. The laws which most affect food service establishments are those related to sanitation.

SANITARY CODES

Sanitary codes or regulations are the laws which establish and enforce standards of sanitation in food service. Sanitary codes are often established by state and local departments of health. ***Sanitary inspectors*** are the representatives of the departments of health. They are responsible for checking food service establishments and enforcing sanitary codes. In general, local sanitary codes are modeled after state sanitary codes. Local sanitary codes may be stricter than state sanitary codes, but may not be less strict than state sanitary codes. It is the responsibility of the food service manager to know, understand, and comply with sanitary codes that apply to the food service operation.

LAWS RELATING TO EMPLOYMENT

Another group of laws affecting food service establishments are laws regulating employment, salary, and benefits. Federal, state, and local governments have laws which control employment, salary, and benefits of food service employees.

Some of the federal laws related to employment concerns of food service operations are listed below:

- ***Fair Labor Standards Act*** - also known as the wage-hour law. Applicable to other types of businesses as well as food service operations, this law regulates minimum wages, working hours, equal pay, overtime pay, and child labor. Businesses that have an annual gross sales volume of $250,000 or are involved in interstate commerce are subject to this law. ***Interstate commerce*** refers to business conducted in more than one state.

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- ***Social security*** - a federal program which provides benefits, most of which are related to retired people and the survivors of wage earners. Payments made to social security are deducted from the employees' wages by the employer.

- ***Income tax*** - money collected from an employee's wages if the wages go above a stated level which is established by federal law. Several forms must be completed by the employee to comply with federal tax laws. These forms include the ***Employee's Withholding Allowance Certificate (Form W-4)***. The information contained on this form helps the employer determine how much income tax to withhold from each paycheck.

- ***Wage and Tax Statement (Form W-2)*** - given to the employee in January of each year. This form shows the total wages received from an employer for the year. Federal, state, and local income tax paid will also be indicated as well as the amount of social security tax withheld. Social security tax is referred to as FICA, Federal Insurance Contribution Act. The information contained on Form W-2 will be used by the employee in filing an income tax return.

- ***State labor laws*** - the Fair Labor Standards Act allows each state to establish its own procedures to meet the provisions of the Fair Labor Standards Act. While state laws will differ from state to state, some of the areas covered by state labor laws include the following:

  - ***prevailing wage rate*** - often used in place of minimum wages, this indicates the usual wage in the area for a particular job.

  - ***wage deductions*** - regulations which allow employers to deduct union dues, insurance premiums, credit union contributions, chairitable contributions, and similar employee benefits.

  - ***wage statements*** - a statement which must be given to the employee with every payment of wages. This statement must show the gross wage, deductions, and the net wages. Other information is optional.

  - ***liquor laws*** - laws which govern the minimum age at which minors may be served liquor or work where liquor is served.

  - ***child labor laws*** - laws regulating the age at which minors under the age of 18 may work at food service jobs.

  - ***workman's compensation*** - an insurance program designed to provide workers injured, or the survivors of workers killed on the job with certain benefits. Workman's compensation is a state regulated program; the premiums are paid totally by the employer.

- ***unemployment compensation*** - a federal or state insurance program designed to provide the employee income if the employee loses his or her job and is actively seeking new employment. Premiums to this insurance program are paid by the employer.

COMPLIANCE

The laws affecting food service operations are numerous and are frequently modified. Food service managers must develop ways to stay aware of the laws and any changes made in the laws, and must develop ways to comply with the laws.

For laws related to sanitary codes, personnel at local and state departments of health can provide the most recent information. Free workshops are often provided by these agencies for the benefit of the food service employee. These workshops inform the employee about the sanitary codes and techniques that employees can use to keep the food service establishment in compliance with the law and the customer safe from contaminated food.

Information pertaining to laws governing employment issues such as minimum wages may be obtained from local, state, and federal departments of labor. State employment commissions can also provide current information on federal and state regulations as well as updates on employment-related laws.

Policies and procedures are often used to develop ways of complying with laws that affect food service operations. Policies and procedures must be kept current with any change in the law. Employees must be kept aware of these laws and any changes which affect their employment status. In most localities, laws pertaining to food sanitation are strictly enforced. Regularly held workshops are recommended to continually reinforce the need to comply with sanitary codes. Clearly written policies and procedures related to food service sanitation are also necessary.

Points To Remember

- Food service managers are involved in, and are responsible for, tasks such as menu design, food purchasing, and payroll.
- Management refers to getting work done when and how you want it done through others.
- A successful food service manager should possess certain desirable traits.
- To guide the food service operation, the food service manager must help develop and enforce organizational goals, policies, and procedures.

- Organizational goals are the objectives that the food service operation wants or needs to meet to be financially successful.
- Policies provide guidelines for operations of a business.
- Procedures provide the method or the means by which policies are carried out.
- Policies and procedures are written and placed into a reference book called a *Policy and Procedures Manual*.
- New policies and procedures should be well-planned before they are implemented.
- Policies and procedures are developed through the managerial process known as planning.
- Employee involvement is the key to effective utilization of an organization's goals, policies, and procedures.
- Many local, state, and federal laws affect the food service operation.
- Sanitary codes are the laws which establish and enforce standards of sanitation in food service.
- Sanitary inspectors enforce sanitary codes.
- Sanitary codes are usually established by local and state departments of health.
- Most additional laws affecting food service are related to employment, salary, and benefits. Although some local laws may exist, state and federal laws generally regulate these issues.
- Food service managers may obtain current information about the laws affecting food service operations from various agencies. These include local and state departments of health, state and federal departments of labor, and state employment commissions.
- Policies and procedures are designed to help the food service operation comply with various laws.
- Food service managers are responsible for being knowledgeable about current laws affecting the food service establishment, communicating these laws to employees, and enforcing policies and procedures which keep the food service operation in compliance with the law.

Words To Know

child labor laws
employee involvement
Employer's Withholding Allowance Certificate (Form W-4)
income tax
prevailing wage rate
procedures
sanitary inspectors
social security
state labor laws

interstate commerce
liquor laws
management
organizational goals
policies
Policy and Procedures Manual
unemployment compensation
Wage and Tax Statement (Form W-2)
wage deductions
wage statements
workman's compensation

Questions For Review

1. What tasks will a person be involved with as a food service manager?
2. How can food service employees reach the managerial level in food service?
3. Define "management."
4. What traits are desirable for a food service manager?
5. List six general organizational goals of a food service establishment.
6. Explain the difference between a "policy" and a "procedure."
7. Why is it important that food service establishments have a *Policy and Procedures Manual*?
8. What general questions should be asked before new policies and procedures are established?
9. Why is planning an important process in establishing organizational goals, policies, and procedures?
10. What are some symptoms of an organization that is overburdened with policies and procedures?
11. What are the advantages of employee involvement in food service management? What responsibilities do food service managers have in regard to employees who submit ideas or suggestions?
12. What governmental agencies are responsible for enforcing sanitary codes?
13. What are the general provisions of the following federal laws? Relate each to food service management.
    a. Fair Labor Standards Act
    b. Social security
    c. Income tax
    d. Wage and Tax Statement

14. What is the general purpose of the following provisions of state labor laws? Relate each to food service management.
    a. prevailing wage rate
    b. wage deductions
    c. wage statements
    d. liquor laws
    e. child labor laws
    f. workman's compensation
    g. unemployment compensation

35

Chapter Thirty-five
Cost Control

COMPETENCIES TO DEVELOP

- Cost menu items, set menu prices of foods, and make changes in menu when needed.
- Prepare market orders, and purchase food and consumable supplies.
- Select, develop, and standardize recipes.
- Plan menus appropriate for type of food service.

OBJECTIVES TO ACHIEVE

- Identify food, labor, and equipment cost-control procedures.
- Identify factors influencing menu preparation.
- Outline procedures followed to establish menu prices.
- Describe the method used to standardize recipes.

The heart of a financially successful enterprise is cost control. Without controls, the financial stability of the business is threatened. Cost controls are needed in purchasing, receiving, issuing, and inventorying of food. The framework of cost control is menus.

Menus - The Framework of Cost Control

Menus are the "blueprints," or "framework" that influence factors such as equipment purchases and personnel hired. They also help eliminate guess-work in deciding what to serve and when to serve it. Food service managers rely on well-written menus to aid in making decisions related to the "what-to-buy" dilemma.

Menus are fixed or rotated. ***Fixed menus*** are standard menus, served every day by the food service operation (for example, the menu offered by a fast-food restaurant). Menu changes are infrequent. ***Rotated menus***, also known as cycle menus, are prepared for a specific period of time, such as 11 days or 6 weeks. The length of the cycle will depend on the customer served, the goal of the food service operation, and other factors such as food storage space. In cycle menus, each day has a different menu. When the last day of the cycle has been prepared, the cycle is started over by preparing the first day's menu again (for example the menus used in school cafeterias).

Many factors affect the types of menus planned:

- nutritional needs of customers.
- needs and desires of customers.
- type of food or meal service.
- size of food service operation.
- limitations of equipment.
- number, skill, and availability of employees.
- market price and availability of food.
- variety and appeal of foods.
- amount of revenue needed by the food service operation.

PRICING MENU ITEMS

Menu space is valuable. The variety of items food service operations can prepare and serve is limited. Careful consideration must be given to each menu item, its cost, revenue it will generate, and its acceptance by customers.

Most food service operations are in business to make a profit. Prices in these restaurants depend on the labor, overhead, food costs, and anticipated profit. ***Labor costs*** are costs related to employee wages and benefits. ***Overhead*** is the cost of rent, utilities, and equipment repair and maintenance. ***Food costs*** are related to the costs of foods used in meal preparation. Food costs may also include the cost of supplies, china, and other similar items. ***Profit*** is the money the owner makes after all expenses are paid. Menu pricing can contribute to the success (profit) of a food service operation. Understanding the steps involved in effective menu item pricing is an important concern of food service managers.

Menu pricing is linked to the ***turnover*** (number of customers served during the day) in the food service operation. Often, turnover is determined by calculating the number of customers occupying a dining room seat per hour. If the turnover is high, customers generally spend less on food and beverages, and the markup percentage on menu items will also be smaller.

Two major types of pricing menus are a la carte and table d'hote. A la carte means "from the list." Each item is listed and priced separately. This system allows the food service manager greater control over food costs and menu items offered. Because customers may pick and choose from separate menu items, the average amount spent per check tends to be higher. Food service managers are better able to predict the amount of food needed for each food preparation period. There is more control over purchasing and food costs tend to be lower. Table d'hote is the traditional menu pricing system. In this system, complete meals consisting of several courses are provided at one price. Because the menu is extensive, foods, even if ordered infrequently, must be kept in stock. Table d'hote systems can result in more menu items, higher food costs, and reduced flexibility.

Today's customers want lighter, more nutritious foods. Appetizers and desserts may not be preferred. Table d'hote menu item customers may feel overcharged by accepting foods they do not want. To accommodate changes in customer preferences, many food service operations use a combination of a la carte and table d'hote pricing systems.

FOOD COST CONTROL

Food service managers must know the food cost percentages and standard and potential costs of the food service. These factors help maintain a desirable cost/sales relationship. The ***food cost percentage*** is the ratio of the cost of a food item to its selling price. Food cost percentages are also thought of as the ratio of the cost of a food item to the cost of all items which contribute to a food service operation's total sales. This ratio is used as a convenient measure of the food service establishment's success. Food cost percentage is determined by the following equation:

$$\frac{\text{Cost of food}}{\text{Selling price}} = \text{Food cost percentage}$$

Here is a simple example to illustrate this. A hot dog served to a customer has the following ingredients:

All-beef frankfurter	$.20
Hot dog bun	.13
Hot dog relish	+.03
	.36 = Cost of food

The hot dog is sold a la carte for $.75. The food cost percentage for this menu item is 48 percent.

$$\frac{.36}{.75} = .48 \times 100 = 48\%$$

Once the food cost percentage is determined or if the food service operation has a pre-determined, fixed food cost percentage, the selling price can be determined by the following formula:

$$\frac{\text{Cost of food}}{\text{Food cost percentage}} = \text{Selling price}$$

The selling price of the hot dog in the above example, may be determined using this formula.

$$\frac{.36}{.48} = .75$$

If the selling price has been determined, and the food cost percentage is known, the food service manager can determine the cost of food by using the following formula:

(Food cost percentage x selling price) = cost of food

Using the hot dog example, the cost of food is determined as follows:

.48 x .75 = .36

If the hot dog is sold as the "Jr. Lunch Special" with French fries and a small soft drink, the cost of these items would have to be included in the cost of food. On a larger scale, if a table d'hote menu item is being costed, the food service manager would have to include the food cost of all the foods used in preparing the meal, including garnishes and other food served with menu items (known as ***surrounding items***). When determining food costs, food cost percentages, or selling prices, surrounding items are not charged separately. Rather, the costs of these items are added together.

This type of cost control is important becasue it illustrates to food service managers what must be charged for a menu item to meet food costs (a certain food cost percentage) and still maintain a break-even point. To determine selling price with a profit percentage calculated in, the following formula is recommended:

(selling price x percentage markup) + selling prices = menu price

Standard markups are used for several groups of items. The item groups and their standard percent of markup are

Item	Markup
High-priced items	10%
Fast-moving items	15%
Slow-moving items	20%
Appetizers	50%
Desserts	40%

To illustrate how to figure a markup, use the hot dog example again. The selling price of the hot dog with relish was calculated to be $.75. If the hot dog was being sold at an airport snack bar, it will probably be a fast-moving item. By the standard, the percent markup on this item is 15%.

$.75 x .15 = .1125 or $.11

To find the final menu price for the hot dog, we first multiply 15% (or .15) by $.75. This is $.11. Eleven cents is then added to the selling price of $.75; the result is $.86. For convenience, most odd figures are rounded off. In this case $.86 would be rounded up to $.90. This $.90 would be the menu price of the hot dog and includes 15% profit markup. The specific math steps in this problem are

(\$.75 x .15) + \$.75
(\$.11) + \$.75 = \$.86 = menu price

HOW THE MENU AFFECTS FOOD SERVICE MANAGEMENT

Because food is expensive, food service managers must consider food costs when preparing menus. However, cost should *not* be the only factor in deciding whether to include an item on the menu. The food service manager should match menu items to customer preferences.

The type of menu designed will, to a certain degree, dictate the personnel hired. If a menu calls for classic French-cuisine, a well-trained, highly qualified chef must be hired. A small cafe offering a limited lunch menu of soup and sandwiches may be able to train high school and college students sufficiently to prepare quality food.

The menu should use the avaiable equipment as efficiently as possible. Dishes, cookware, and utensils should be stored so that they can be easily located by food preparation workers whenever they are needed. There should be adequate work space available so that the steps in food preparation flow smoothly. Sufficient inventory should be kept on hand as is necessary to meet the production demands of the food service operation.

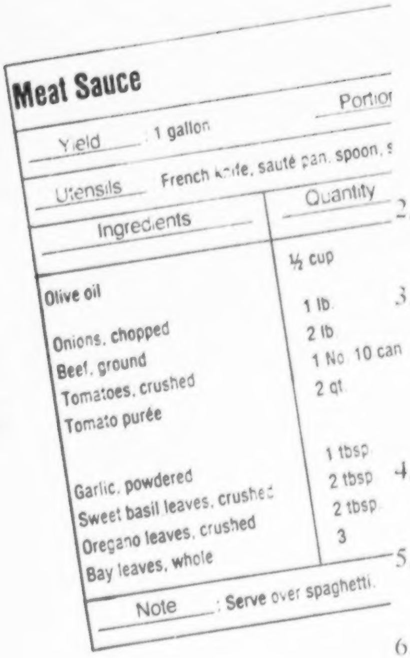
Food service managers must ***forecast*** or try to predict the popularity of a new menu item. Forecasting helps reduce the problem of under- or over-buying until a pattern of customer acceptance of an item can be determined. Finally, food service managers must keep records of which menu items are more popular than others. These records aid in making decisions about replacing unpopular, unprofitable items with foods having greater customer appeal. Forecasting and keeping records of menu item popularity provide information needed for food and supply purchasing.

Standardized Recipes

The use of standardized recipes is another cost control technique used by food service managers. A standardized recipe is a formula for producing a food product. Standardized recipes can guarantee consistent food quality and quantity. Standardized recipes help control costs by identifying foods to be used in specific amounts. They also control costs by identifying the number and size portions produced. And, standardized recipes save labor costs by reducing employee confusion during food preparation. With standardized recipes, menu items can be replicated and food quality maintained, despite turnover in personnel.

DEVELOPING STANDARDIZED RECIPES

Standardized recipes are available from many sources: trade journals, salespeople, trade associations, and government agencies. These recipes should be tested at the food service operation before they are included in the menu. This ensures that the recipe is practical, tasty, compatible with equipment and personnel available, and is suitable for customers, and is consistent with the establishment's pricing structure. Guidelines for developing standardized recipes include the following:



Meat Sauce

Portio

Yield : 1 gallon

Utensils French knife, sauté pan, spoon, s

Ingredients	Quantity
Olive oil	½ cup
Onions, chopped	1 lb.
Beef, ground	2 lb.
Tomatoes, crushed	1 No. 10 can
Tomato purée	2 qt.
Garlic, powdered	1 tbsp.
Sweet basil leaves, crushed	2 tbsp.
Oregano leaves, crushed	2 tbsp.
Bay leaves, whole	3

Note : Serve over spaghetti.

1. Use a recipe form that clearly explains to the food preparation worker
   - the product being prepared.
   - how much is being prepared.
   - which pieces of equipment and utensils are necessary to prepare the product.
   - how much time is required to prepare the product. This often is broken down into pre-preparation time and cooking time.
   - the number of portions expected. This is known as the yield of a recipe.
   - the size of the portion.
   - how the portion is to be served.
2. List the ingredients in the form and the order in which they will be used.
3. List the steps of the preparation in the order that they are done. If a pre-preparation step is needed, such as chilling a bowl for whipping heavy cream, list it at the beginning of the recipe. Lines drawn between major steps of recipe preparation help food service workers organize their tasks.
4. Ingredients that are to be mixed or prepared should be grouped together.
5. List the steps of a procedure next to the ingredients included in the procedure.
6. List all measurements by weight, if possible. Weight measurements are easier to follow and are more accurate than measured units.
7. List the items first and then the form (Onions, chopped).
8. Write out instructions completely, without abbreviation, except for standard measurement abbreviations.
9. Use accepted terms understood by food service employees.
10. Translate recipes into the food service worker's native language, if other than English.
11. Avoid phrases such as "just a pinch" or "season to taste." Be as specific as possible.
12. Provide amounts of ingredients needed commonly served by the food service operation. For example, amounts might be given for yields of 25 and 50 servings. This saves the food service worker

time and effort in recalculating. This also ensures quality of the product when smaller or larger amounts are prepared.

13. Type the recipe on a 5" x 8" card and seal it in plastic; the recipe is easier to read and cannot get soiled.

14. Number the card for ease in storing and locating it when needed.

15. Attach clips over production tables where recipes can be placed during food preparation. This keeps the card up, out of the way of the worker, and makes reading easier.

16. Check, review, and update recipes periodically.

TESTING STANDARDIZED RECIPES

Food service managers must be able to convert, test, and direct the use of standardized recipes. Seldom can recipes be used "as is" by all food service operations. Variables such as customer preferences, equipment availability, and employee skills will affect a recipe's outcome and desirability. Recipes should be tested before they are used and periodically retested during the year, especially if the ingredients to be used have been changed or if larger or smaller quantities are desired.

Test by preparing the recipe as is. Ask key personnel or other persons knowledgeable about foods to evaluate the product for

- Taste.
- Appearance.
- Labor required.
- Amount of preparation required.
- Cost.

Identify problems, make adjustments, and retest until a desirable product is obtained. Use an established evaluation form such as a rating scale to record results. This helps reduce errors in judging the product, directs the evaluation process, and can be structured to speed up the scoring and evaluation of a food item.

The following is an example of a well-written standardized recipe:

Broiled Chopped Steak
Recipe Number 82

Yield: 25 or 50 portion (No. 8 scoop size)
Utensils required: 20 qt. mixer
Portion scale
2 baking sheets, 18"x 36"x 1"
No. 8 scoop
Time required: 30 minutes - preparation
20 minutes - cooking
Method of serving: Serve on dinner plate with 1/2 oz. brown beef gravy.

	Weight		Measure	
Ingredients	25 portions	50 portions	25 portions	50 portions
Beef, ground	4 lbs.	8 lbs.		
Onions, finely chopped	4 oz.	8 oz.	3/4 c.	1/2 c.
Green pepper, finely chopped	4 oz.	8 oz.	3/4 c.	1/2 c.
Milk, whole			1 c.	2 c.
Eggs, large			6	12
Bread crumbs			1 qt.	2 qts.
Bacon, sliced			25	50
Toothpicks			25	50

Directions

1. In a large mixer bowl, combine beef, chopped vegetables, milk, eggs, and bread crumbs.
2. On low speed, mix for 2 minutes.
3. Using No. 8 scoop, shape mixture into 4 oz. patties.
4. Place on lightly greased baking pans.
5. Wrap a slice of bacon around each meat patty. Secure with a toothpick.
6. Place patties under broiler for 10 minutes on each side.
7. Serve on dinner plate with 1/2 oz. brown beef gravy.

COSTING STANDARDIZED RECIPES

To further control costs, each recipe must be ***precosted***. This is done by finding the cost of each ingredient used to make the recipe, then totaling the cost of all ingredients. The cost of all ingredients used to make the recipe is divided by the yield or the number of servings to find the cost per serving. The recipe costing of the recipe for broiled chopped steak is as follows:

Recipe Cost

Recipe No. 82
Yield: 50 portions

Ingredients	Amount Used	Market Price	Cost of Amount Used
Beef, ground	8 lbs.	1.12 per lb.	$8.96
Onions	8 oz.	.19 per lb.	.10
Green peppers	8 oz.	.30 per lb.	.15
Milk, whole	2 c.	1.89 per gal.	.24
Eggs, large	12	.89 per doz.	.89
Bread crumbs	2 qt.	.49 per qt.	.98
Bacon	50 sl.	1.89 per lb.	4.35
Toothpicks	50	.20 per 100	.10
Total cost/recipe			$15.86
Total cost/portion			.32

Points To Remember

- Cost-control procedures include purchasing, receiving, issuing, and inventorying of food and supplies.
- Well-prepared menus are the basis for many food service operations.
- Factors which influence menu planning include nutritional needs of customers, the preferences of customers, types of meal services offered, limitations of equipment, skill and availability of employees, variety and appeal of foods, and the revenue needed.
- Menus may be fixed or rotated.
- Rotated menus are also known as cycle menus.
- When pricing menus, food service managers must consider the labor, overhead, food costs, and customer turnover.
- The two major types of pricing menus are a la carte and table d'hote.
- Food service managers must know food cost percentages for all menu items.
- The menu will have several effects on food preparation.
- Standardized recipes can ensure consistent food quality; control cost through the specification of foods to be used, methods of preparation, and portion size; reduce employee confusion during food preparation; and increase customer satisfaction.
- A standard procedure for preparing and testing recipes should be followed.
- A standardized recipe should include information concerning recipe yield, utensils required, time required for preparation, method of serving, ingredients used, amount (weighted and measured), and cooking time and temperature.
- Standardized recipes should be costed out to determine the cost of the total recipe and the cost of a portion.

Words To Know

fixed menus
food cost percentages
food costs
forecast
labor costs
overhead
precosted
profit forecast
rotated menus
surrounding items
turnover

Questions For Review

1. What forms the framework of cost control in food service?
2. Describe rotated and fixed menus.
3. What is another name for cycle menus?
4. What factors affect the types of menus planned?
5. What four cost items affect menu prices?
6. Define
   labor costs
   overhead
   food costs
   profits.
7. What is turnover as it is applied to menu pricing and what is it linked to?
8. Describe the differences in a la carte and table d'hote menus.
9. Tell how to figure food cost percentage.
10. Tell how to figure selling price.
11. What is the standard markup for high-priced items? For slow-moving items? For desserts?
12. A hot dog has the following ingredients: all beef frankfurter ($.25), bun ($.11), onion ($.03), pickle ($.07), mustard ($.05). What is the cost of the hot dog? The hot dog's food cost percentage is 53%, what is the selling price?
13. Discuss two ways in which the menu affects food service management.
14. How is a standardized recipe tested?
15. List at least 10 guidelines for developing standardized recipes.
16. Explain the procedure for precosting a standardized recipe.

36 Chapter Thirty-six Buyers, Receivers, and The Storeroom

COMPETENCIES TO DEVELOP

- Contact purveyors, and compare food prices.
- Direct stockroom activities.
- Take inventories of food, utensils, and equipment.
- Utilize food, labor, and equipment cost control procedures.

OBJECTIVES TO ACHIEVE

- Determine effective methods for purchasing food and consumable supplies.
- Develop an effective and efficient method of conducting stockroom activities.

Two areas that must not be neglected by food service management are purchasing and inventory. No successful food service establishment can be operated without a good purchasing agent (often the manager) and a well established inventory control system.

Purchasing Foods and Consumable Supplies

After menus have been developed and recipes tested, food production begins with food and supply purchasing. The person who is in charge of buying food and supplies is called a ***buyer***, a ***steward***, or a ***purchasing agent***. In small restaurants, the manager or a chef may do the buying.

CHARACTERISTICS OF A BUYER

The buyer for the food service operation is faced with numerous decisions in meeting food and supply needs. Food purchases are based on the menu, food budget, labor cost, skill of personnel, season of the year, and availability of food.

The buyer should study the use of food and supplies in the establishment and work with the food preparation staff to determine what is required. Standards should be set for each item purchased. Only when the buyer knows what is needed can those needs be met by effective purchasing.

To be an effective buyer, the food service manager must have practical food knowledge. Knowledge needed by the food buyer includes

- The menu requirements of the food service operation.
- Sales forecasts for the next month or quarter.
- Amount of food and supplies on hand.
- Money available for purchases.
- Methods of quantity cookery and food production.
- Basic cuts of meat.
- Grades and standards of food.
- Methods of processing, grading, sizing, and packaging fresh, canned, frozen, and dehydrated fruits and vegetables, groceries, and staples.
- Quality tests for various products.
- Weight considerations for food purchases.
- Ways to determine the advisability of using prepared or semi-prepared foods to save labor in the kitchen.
- Equipment, utensils, and supplies used in food service establishments.
- How to write purchase specifications for food and supplies.
- The market system, including crop conditions, sources of supply, and seasonal price variations.
- Purchasing procedures.
- Business law and the specific regulations governing the sale of food and beverages.
- Past buying records.
- Procedures for developing an order.
- Procedures for ordering staple items.
- Procedures for obtaining bids, contract buying, and working with salespersons.
- Receiving and storing procedures and controls.

The food buyer must also have a high standard of professional ethics. Lendal Kotschevar, in *Quality Food Purchasing*, proposes the following code of ethics for food buyers:

- Be courteous at all times.
- Establish regular hours for salespeople to call, and adhere to this schedule. See out-of-town salespeople first. See everyone, but devote only the time needed to promote purchasing business.
- Be fair. There must be give-and-take in all purchase situations.
- Keep a sense of humor.
- Use rational motives in buying. Evaluate all factors.
- In dealing with competitors, do not play one against the other. Do not disclose another's prices, and do not pass information on.
- Use the company's money as you would your own.
- Do not discuss business affairs outside the office.
- Set a high standard of conduct, and let others benefit by it.
- Never compromise your freedom of action as a buyer by accepting invitations or favors from a supplier.[1]

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[1] Kotschevar, Lendal K. *Quality Food Purchasing*. 2nd ed. New York: John Wiley and Sons, Inc., 1975. p. 24.

PURCHASING PRINCIPLES

Most buyers observe several basic principles when purchasing food and supplies:

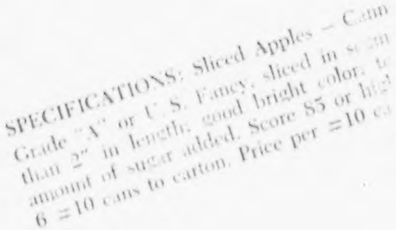
1. *Identify items to be purchased.* Always start with the menu and price policy when planning food purchases. Consider how and when the items will be used. Know how much storage space is available.
2. *Use the amount on hand as a basis for deciding how much to order.* Inventory records should show how much of each item is on hand.
3. *Let past use and expected use guide you in deciding how much to order.* Accurate sales records and projections aid in planning purchases.
4. *Buy for a set period of time.* This helps prevent overbuying or underbuying.
5. *Keep inventories as low as possible to keep costs down.* A large food and supply inventory may result in loss of quality, pilferage, waste, excessive labor for handling, errors in inventory and record-keeping, and tying up funds needlessly.
6. *Order to specification.* Clearly describe the quantity and quality needed.
7. *Buying the quality needed at the lowest cost.* Compare prices from several sources. Compare end cost of items in several forms and grades. Higher purchase costs may actually result in lower end costs for some items.
8. *Beware of bargains.* Consider end cost as well as purchase price when comparing items.
9. *Deal with reliable and reputable suppliers.*
10. *Purchase locally from a few suppliers unless substantial savings can be made otherwise.* Purchasing from local suppliers makes communication easier. It is also easier to obtain food and supplies in case of an emergency. Do not try to deal with too many suppliers.
11. *Be familiar with standard abbreviations.* For example "AP" means "as purchased," "EP" means "edible portion," and "FOB" means "free on board" to the city to which it is being sent.

FIVE STEPS TO EFFECTIVE PURCHASING

To be effective buyers, food service managers must have a definite plan for purchasing food and supplies. The following steps are recommended for purchasing:

1. *Determine what is needed.* Menu planning and standardized recipes will tell the buyer what foods and supplies are necessary to prepare the menu items for the next menu period.

2. *Determine the quality and quantity desired for each item.* The intended use of each item purchased must be known so that the right quality can be ordered. The quantities used regularly must be known so that the right amounts and sizes can be ordered. Quality and quantity information are used to make ***purchase specifications*** for each item ordered. Several types of specifications are given in the table below.



SPECIFICATIONS: Sliced Apples — Cann
Grade "A" or U. S. Fancy, sliced in
than 2" in length; good bright color, t
amount of sugar added. Score 85 or hi
6 #10 cans to carton. Price per #10 c

Specification	Use
Wholesomeness	Ensures that product is healthful and nutritious.
Use of Product	Aids in choosing the appropriate type or grade, or aids in making substitutions when necessary.
Grade	Classifies foods by a descriptive term or a number to ensure uniform quality.
Container Sizes	Aids in choosing an amount that can be used in a reasonable period of time without waste.
Yields	Tells number of usable portions of the purchased amount.
Financial Factors	Give seasonal price variations, peak demand periods, quality variations, and overall serving costs.
Other	Includes specifications for weight, size, count, pack, style, degree of ripeness, etc.

When standardized recipes are used, purchase specifications can be developed for each recipe. The buyer then keeps a file of ***specification cards*** for all foods used in the food service operation. The specification cards contain all the information the buyer needs to order the item. The cards are filed alphabetically or numerically for easy reference. Suppliers and current prices for the items are recorded on each card. If specifications are changed, every worker handling the product must be instructed and shown how to use the product.

The food buyer may find it helpful to sample products before buying them in large quantities. The buyer can try products in several ways before making large purchases. One way is to invite the supplier to provide samples for inspection. Another is to attend periodic tastings held by the supplier. A third is to purchase and try a small amount of the product. This method provides an opportunity for yield testing and preparation time comparisons.

3. *Obtain price information periodically from several sources.* Price quotes should be requested from suppliers on a regular basis. Also, suppliers will generally notify their customers of price changes.

   In addition to obtaining price quotations from competing suppliers, the food buyer should make use of other sources of market information. One excellent source is the government:

   - Federal and local government releases in daily newspapers and in newsletters provide information concerning commodity food prices, crop conditions, and other valuable information. This information can be found in any of the following:
     - Local trade sheet.
     - Radio and television programs.
     - Commercial market reports.
     - Price quotations from suppliers.

4. *Select the supplier and place the order.* The buyer must consider a variety of factors in choosing a supplier. Such considerations should include the ones listed below:
   - Does the supplier generally have, or can the supplier quickly obtain, the food or supplies needed?
   - Does the supplier maintain a large enough stock to meet the needs of customers?
   - Will the supplier deliver goods when they are needed? Will the supplier make emergency deliveries?
   - Does the supplier offer credit?
   - Will the supplier store items and deliver the items as needed?
   - Does the supplier partially prepare some foods, enabling the food service establishment to cut labor costs? For example, can scrubbed and wrapped potatoes for baking be obtained?

   Many suppliers are now known as ***full-line purveyors***. This means that the company sells a wide array of items used by food service operations. These companies may offer cooking and service equipment, fresh meats, fruits, and vegetables, and other items used by food service operations.

   Special payment terms or ***credit terms*** are of interest to the food buyer. Some suppliers will offer a discount to the buyer if the bill is paid in full before a certain date. The most common credit term is 2/10: NET 30. This means that if the buyer pays the bill on or before the 10th day of the month, he or she will receive a 2 percent discount. If the bill is paid between the 11th and the 30th day of the month, the full payment must be made. For example, if the ABC Cafe has a food bill from ACME Foods for $600.00, the manager of the cafe would save $12.00 (2% of $600.00) if the bill is paid on or before the 10th day of the month. After the 10th day, the manager must pay the full amount.

Orders are placed in two ways:

- *Type of supplier.* Food and supplies may be purchased from several types of suppliers (***purveyors***, vendors, or ***dealers***).

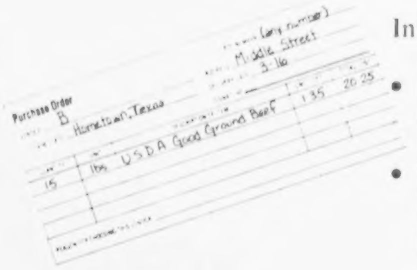
- *Type of food.* Perishable foods make up the largest part of the total food purchases in many food service establishments. These foods include meats, poultry, seafood, fruits, vegetables, butter, and eggs, and must be purchased frequently. They vary more in both quality and price than other food items. For those reasons, they require more of the buyer's time and effort.

Perishable foods are usually purchased from any of several suppliers. Quotations on prices are obtained from each; then, the order is given to the one offering the lowest prices for the quality. This type of buying is done usually by telephone, but it may also be done through salespeople, or through visits to the supplier's warehouse. Perishable foods should be purchased no more than two or three delivery days in advance.

Staple foods are usually purchased from salespeople who call on the buyer regularly. These foods include processed foods, packaged foods, and other groceries. Because these foods vary less in quality than perishable foods, they can be purchased on a more routine basis. Sources for staple foods include wholesale grocers or jobbers who specialize in institutional products, and national food manufacturers who may sell direct or through distributors. The establishment may choose to stock about one week's needs of staple foods plus a 50 percent safety factor.

Prepared and convenience foods, such as bread, rolls, pastry, milk, ice cream, and coffee are often purchased regularly from one source. Deliveries may be made daily or several times a week.

When orders are placed, it is vital that the buyer complete the necessary forms. The form used to order food and supplies is known as a purchase order or a ***P.O.*** Information contained on the purchase order indicates the quantity desired, a clear description of the product desired, the name and address of the supplier, expected delivery date, and the item cost. A separate purchase order must be written for each supplier. Each purchase order is given a number. Two copies of the order are prepared which list the items of delivery. If the supplier cannot deliver an item by the date needed, then the buyer can be told in time to order the item from another supplier.



Purchase Order
B
Hometown, Texas
(any number)
Middle Street
3-16

15	lbs	USDA Good Ground Beef	1.35	20.25

Information typically included in a purchase order is

- ***Unit*** refers to the size or type of container in which the food is sold. Examples of units are sack (100-lb.), gal., can, lb., or case.

- The ***unit price*** is the price paid for one unit. For example, the unit price for tomatoes might be 59 cents per pound. The unit price for bread might be 45 cents per loaf.

- The ***total cost*** is the price for the amount ordered. To determine the total cost of an item, multiply the unit cost by the quantity ordered.

The buyer must be sure that enough storage room is available. The quantity of food and supplies ordered varies with the type and size of the food service operation, the amount of storage room, and the nature of the product. Staple foods can be ordered in large quantities since they keep longer than other foods. Other foods, like fresh fruits and vegetables, spoil very quickly. These foods must be ordered in small quantities and delivered often.

Policies must be established regarding who can sign purchase orders. Procedures for using delivery and inspection forms, signing invoices, and so on must also be established.

5. *Follow up on the order, if needed.* One copy of the purchase order is kept in the buyer's files; the other is sent to the receiving clerk. In some cases a third copy is forwarded to the supplier to confirm the order.

Some advantages of using the purchaser order are that it

- provides a complete record of the order for each supplier.
- provides a guide for the receiving clerk, allowing time to take action on merchandise late in arriving, and it immediately indicates overshipment or undershipment of orders.
- provides the receiving clerk with an immediate verification of invoice prices with accepted quotations.

Receiving, Inspection, and Storage

A major part of effective purchasing is the receiving, inspection, and storage of food and supplies ordered. Without cost and quality checks during these phases, cost-control techniques established during purchasing are rendered useless.

RECEIVING AND INSPECTION

The buyer must take time to check deliveries, making certain that the quality and specifications of the merchandise delivered agree with the order. Count and weight checks may be left to the ***receiving clerk***. The main job of the receiving clerk is to count and weigh the food and supplies delivered and to record what is received. As an important member of the cost control team, a receiving clerk should be alert, accurate, and have some food knowledge. Above all, he or she must be trustworthy. The receiving clerk should also know the importance of receiving the quality as well as the quanity ordered. Quality is also usually checked by the manager, assistant manager,caterer, dietitian, or one of the cooks.

Various methods of receiving orders are used. In the usual method of receiving, the receiving clerk receives duplicate purchase orders which list the goods ordered. He or she then checks to see that these goods were delivered and makes an appropriate entry on the receiving record. This method forces the receiving clerk to count or weigh each item, not just to copy the information from the invoice or delivery ticket.

Methods of receiving vary from one food service operation to another. Food and supplies should be received and checked in an efficient and orderly manner. In the receiving process, foods received are matched with what was ordered, using such tools as scales, thermometers, or counts to check quality and quantity.

Errors in deliveries frequently occur. Unless a careful check is made of count, weight, and quality, costly losses can result.

Items that do not conform to specifications or items that are damaged should not be accepted. When deliveries are not satisfactory, the purveyor must be notified. Arrangements should be made to return the merchandise or to obtain proper credit. Whoever accepts delivery merchandise should always note exceptions when signing delivery papers.

STORAGE

Careful consideration must be given to the appropriate storage of foods and supplies once they are delivered. To reduce the chance of spoilage and to maintain quality, foods should be stored properly for the shortest period of time possible. A food storage chart is in Chapter 12, Food and Supplies.

Losses due to spoilage may be avoided by storing foods in well-ventilated areas at proper temperatures and by avoiding excessive storage times. Contamination by vermin, rodents, leaky pipes, dirt, dust, broken containers, or other foreign substances should be prevented.

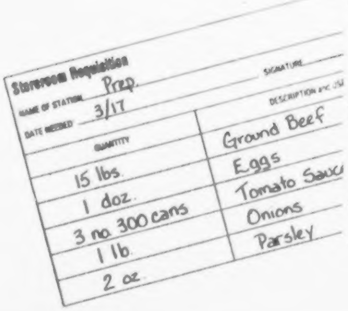
Storeroom Control

Strict storeroom controls are necessary to prevent pilfering or spoilage. Theft in food service operations can be reduced by strict storeroom controls. Three basic rules for safeguarding the storeroom are listed below:

1. Keep the storeroom locked.
2. Safeguard the storeroom keys when not in use.
3. Do not permit unauthorized persons to enter the storeroom.

ISSUING

In larger food service operations, the issuing of foods and supplies is strictly controlled. To obtain foods and supplies, workers must complete a ***requisition form*** listing the items needed.



Storeroom Requisition

NAME OF STATION Prep.

DATE NEEDED 3/17

SIGNATURE

QUANTITY	DESCRIPTION AND US
15 lbs.	Ground Beef
1 doz.	Eggs
3 no. 300 cans	Tomato Sauc
1 lb.	Onions
2 oz.	Parsley

The department head must sign the form before the requisition order can be filled by the storeroom clerk. With this system of issuing food and supplies, orders are not filled without a properly signed requisition.

Correctly completed requisition orders should include the date, the department or area of food preparation requesting the supplies, the name and grade of the item needed, and the signature of the department head. The description of the name and grade of an item must be clear. An example of this form is shown in Chapter 12, Food and Supplies.

INVENTORYING

Methods of inventorying foods and supplies are thoroughly discussed in Chapter 12, Food and Supplies. Both perpetual and physical inventories are needed to control costs. Differences between the two types of inventory must be investigated. Illegible requisitions, pilferage, spoilage, incorrect pricing, or arithmetic errors may be reasons for differences between perpetual and physical inventories.

End-of-the-month evaluation of inventory records can provide food service managers insight into the operation, provide information necessary for preparing orders, and indicate how much money is tied up in food supplies. Although adequate supplies are needed, it is unwise to have large stock piles of items "just in case." This reduces capital which may be needed for some other use in the food service operation. Also, needlessly large inventories increase the risk of pilferage, theft, and spoilage.

Points To Remember

- The food buyer must obtain the right foods at the right price and at the right time.
- The food buyer must consider the quality of food needed and its intended use, know the food specifications or standards, and know the correct procedure for purchasing food and supplies, the food budget, skill of the food preparation workers, and the availability of foods.
- A food buyer must uphold a stringent code of ethics.
- Food buyers are also known as purchasing agents or stewards.
- Most buyers observe several basic principals when purchasing food and supplies.
- An effective buyer will follow a plan for purchasing foods and supplies.
- This plan includes determining what is needed, determining the quality and quantity desired for each item, obtaining prices from several sources, selecting a supplier and placing an order, and following up on the order if necessary.

- Food and supplies are ordered using a purchase order.
- Food buyers must be aware of any special payment terms or credit terms which may save the food service operation money.
- Food and supplies may be purchased by the type of supplier or the type of food.
- The final phases of cost control are the receiving, inspection, and storage of food and supplies.
- The buyer or receiving clerk must take time to check deliveries, making certain that the quality and specifications of the merchandise delivered agree with the order.
- Items not conforming to specifications or items that are damaged should not be accepted.
- Careful considerations must be given to the appropriate storage of foods and supplies once they are delivered.
- Strict storeroom controls are necessary to prevent pilfering or spoilage.
- In many food service operations, workers must complete a requisition form to obtain food and supplies.
- Inventories can help food service managers monitor food costs, plan for market orders, reduce the chance of losses due to spoilage, and control employee theft or pilferage.

Words To Know

buyer
credit terms
dealers
full-line purveyors
P.O.
purchase specifications
purchasing agent
purveyors
receiving clerk
requisition form
special payment
specification cards
steward
total cost
unit
unit price

Questions For Review

1. What are two other titles for the position of food buyer?
2. What are the 10 elements of Lendal Kotschevar's food buyer's code of ethics?
3. List at least 10 areas of practical food knowledge that a food buyer needs to know.
4. What are 10 basic purchasing principles to be observed by food buyers?

5. What are five steps a person can use to become a better purchaser?
6. What is a food specification card? For what is it used?
7. What sources can a buyer use to find current commodity food prices, crop conditions, and other market information?
8. Discuss several factors a buyer must consider when choosing a supplier.
9. What is a food purveyor?
10. Explain the purpose and functions of a purchase order.
11. List some advantages to using a purchase order.
12. What are the duties of the receiving clerk?
13. List three basic rules for safeguarding the storeroom.
14. Discuss how, in larger food service establishments, workers can obtain food and supplies using a requisition form.
15. What are 5 reasons for differences between perpetual and physical inventories.

37

Chapter Thirty-seven
Finances and Recordkeeping

COMPETENCIES TO DEVELOP

- Prepare and maintain records, correspondence, and forms.
- Plan and analyze finances, costs, and sales.

OBJECTIVES TO ACHIEVE

- Identify factors affecting financial stability of food service operations.
- Describe financial records needed in food service operations.
- Analyze financial records to determine the financial status of food service operations.
- Identify ways in which computers are being used in food service.
- Determine factors to consider when selecting a computer system for food service.

Accounting and recordkeeping, budgeting, cost control, and money handling are important parts of the food service establishment's control system. Trained bookkeepers and accountants are usually employed for these tasks.

Many times, however, the food service manager is responsible for keeping the "books." Therefore the manager must be thoroughly familiar with accounting procedures.

Financial Stability of Food Service

If the food service operation experiences a loss or only a small profit, the manager must find the cause and take steps to correct it. Some common reasons for low profit or a loss are shown in the following table:

COMMON REASONS FOR LOW PROFIT OR LOSS

Problem	Possible Causes	Possible Solutions
High payroll	Too many workers have been hired. Workers are being paid too much.	Increase income. Lay off some employees. Cut the amount paid each worker.
High food and supply costs	Food is spoiling because too much was purchased. Too much is being paid for food and supplies Food is being stolen.	Make smaller purchases. Find less expensive suppliers. Buy cheaper quality. Practice portion control. Reduce waste. Eliminate theft. Raise prices.
Low income	Menu items are priced too low. Not enough advertising is being done. Too few customers are coming in.	Advertise more. Feature low-priced daily specials. Be sure facility is clean and attractive. Raise prices.

Financial Statements

Most business accounting systems require two major financial statements which are essential to the operation of the business. These two financial statements are the balance sheet and the profit and loss statement. The balance sheet lists the assets and liabilities and owner's equity of the food service establishment. The profit and loss statement lists the total sales, costs, expenses, and profits for the food service establishment.

Prices and wages change rapidly. The manager must be aware of the food service operation's income and expenses at all times. The balance sheet and the profit and loss statement allow the manager to quickly assess the food service establishment's financial position.

BALANCE SHEET

The ***balance sheet*** is an up-to-the-moment picture of the food service operation's financial status. The balance sheet tells what the operation owns and owes. The balance sheet must be kept up to date. From these two figures, the assets and liabilities, the food service manager can determine the net worth of the operation. An example of a balance sheet follows.

Anytown Restaurant
Balance Sheet
December 31, 1985

Assets			Liabilites and Owner's Equity		
Current Assets:			Current Liabilities:		
Cash (in bank and on hand)	$5,864		Accounts Payable	$ 3,528	
Accounts Receivable	1,526		Installment Accounts or Bank Notes Payable	14,680	
Food and Beverage Inventory	2,480		Payroll and Occupational Taxes Payable	892	
Supplies	560				
Total Current Assets		$10,430	Total Current Liabilites		$19,100
Fixed Assets:			Owner's Equity:		
Stationary Kitchen Equipment	$10,500		Owner's Equity	$10,550	
Hand Kitchen Equipment	2,493		Total Owner's Equity		$10,550
Dining Room Furniture and Fixtures	3,829				
Tableware, Glassware, Flatware, and Linens	2,578				
Total Fixed Assets		$19,400			
Total Assets (Current and Fixed)		$29,830	Total Liabilities and Owner's Equity		$29,650

The ***assets*** of the operation are the things owned or in possession of the food service operation that have monetary value. Assets include cash on hand or in the bank; money owed the food service operation, known as ***accounts receivable***; and food, beverages, and supplies in the current inventory. These items are identified on the balance sheet as ***current assets*** because they are more "fluid" or subject to changes within a short period of time. ***Fixed assets*** refer to equipment that tends to be stable over time, such as kitchen equipment, dining room equipment and supplies, and tableware and serviceware. ***Total assets*** are determined by adding the current and fixed assets.

Liabilities refer to the items which represent a cost to the food service operation. Liabilities and owner's equity make up the second section of the balance sheet. ***Owner's equity*** refers to the value of the owner's investment in the business. It is also called capital or net worth. Liabilities include payroll, employee taxes, installment or bank loan notes owed by the food service operation, and ***accounts payable***. Accounts payable refer to money owed to suppliers or other creditors. When total liabilities and owner's equity is compared to the total assets, the food service manager hopes to have a positive balance. This means that the total assets are greater than the total liabilities. If the balance sheet shows a negative balance, the food service manager needs to take immediate steps to correct the imbalance and improve the financial status of the operation.

PROFIT AND LOSS STATEMENT

The second major financial record used by food service operations is the ***profit and loss statement***, a summary of the food service operation's business transactions during an accounting period. An example of a profit-loss statement is shown in the following illustration:

Anytown Restaurant
Profit and Loss Statement
March 31, 1985

Total Sales:		$750,000	100%
Food Cost:			
Inventory at Beginning of Year	$ 75,000		
Food Purchases During the Year	+ 225,000		
Total	300,000		
Less: Final Inventory	- 50,000		
Cost of Food Sold		- 250,000	33.3%
Gross Profit		$500,000	66.7%
Expenses:			
Salaries	200,000		26.7%
Other Expenses	+ 150,000		20.0%
Total Operating Expenses		- 350,000	46.7%
Net Profit		$150,000	20.0%

The profit and loss statement analyzes the financial status of the food service operation by comparing the cost of food purchased, cost of food sold, and operating expenses against total sales for the food service operation. This is also referred to as determining the gross profit and net profit for the operation. The ***gross profit*** is the money left after the cost of the food sold is subtracted from the total sales. ***Net profit*** is the money left after salaries and other operating expenses such as overhead are subtracted from the gross profit. As with the balance sheet, food service managers strive to have positive balances on the profit and loss statement.

Break-even Analysis

Food service managers often conduct a ***break-even analysis*** to determine where income and expense are equal. To do this type of financial analysis, variable and fixed costs must be figured.

Variable costs include all changeable costs, usually expenses that change as sales change. If more food is served, food and serving expenses are higher. If less food is served, food and serving expenses decrease. Variable costs include paper supplies, laundry, part-time employees, and tableware replacement.

Fixed costs are expenses that remain stable over time and are unaffected by the rise and fall in sales. Fixed costs include occupational and primary expenses. ***Occupational expenses*** are expenses which must be paid for the right to operate the food service establishment. These expenses include property tax, insurance, interest or mortgage, and depreciation on equipment, furniture, and the building. ***Depreciation*** is the amount something decreases in value over a specified time period. ***Primary expenses*** are those which occur only when the food service operation is open, but are not affected by the number of customers served. Primary expenses include utilities, the employees necessary to open the food service operation (basic staff), telephone costs, repairs and maintenance of the building and equipment, local and state licenses to serve food and beverages, and insect and rodent extermination.

To figure the break-even point, the figures should be converted to percentages. This makes it easier for the food service manager to see the relationship between sales and expenses. To illustrate, assume that Anytown Restaurant had the following sales and variable costs are:

Total Sales	$40,000
Variable Costs	$16,000

Total sales always equals 100%. The percentage of variable costs is determined by dividing variable costs by total sales and multiplying by 100.

$$\frac{\$16{,}000}{\$40{,}000} \times 100 = 40\%$$

To find the break-even point, the gross profit percentage must first be identified. This is done as follows:

Total sales	$40,000	100%
Less: Variable costs	−16,000	−40%
Gross Profit	$24,000	60%

The break-even point is found by dividing the dollar amount for gross profit by the gross profit percent.

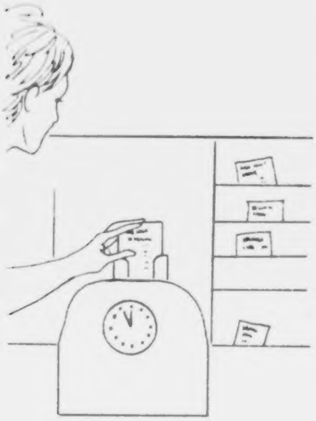
$$\frac{\$20{,}000}{.6} = \$33{,}333$$

The resulting figure, $33,333, is the break-even point. This means that sales for Anytown Restaurant must not go below $33,333 for the food service operation to break even. If sales are above $33,333, then the food service operation realizes a profit. If sales go below $33,333, the food service operation realizes a loss.

Employee Records

While not considered financial statements, accurate employee records must be kept for tax and insurance purposes. Employee records such as time schedules, time cards or records, and social security influence the food service operation's cost controls.

Employee schedules aid in the distribution of labor during peak production and service times and help ensure the employee of being scheduled for work in a fair and equitable manner. These may also be known as work schedules and are usually planned by the food service manager one month in advance. The food service manager should try to rotate weekends and holidays fairly among employees as well as giving employees their choice of when to take time for vacations. Employee schedules, when balanced against the food production schedules, alert the food service manager to the status of the operation's staffing.



Time cards or ***records*** are the records kept by management of the number of hours worked by each employee as well as the number of hours or days sick leave and vacation time taken by the employee. Time cards may be kept by the employee punching in and out of work through a time clock. The time clock records the time the worker started (in) and the time the worker stopped (out). Total hours are then figured for the pay period and multiplied by the employee's hourly wage. The simplest means of maintaining employee time cards is by having the employee sign in and out of work each day on a time schedule form. The method used to log employee hours worked will depend on the food service operation and the philosophy of the food service manager.

EMPLOYEE RELATED TAXES

Employers are required by law to maintain accurate payroll records. These records must include the total earnings of each employee, the amount of tips reported by each employee, the amount of withholding tax kept out of each employee's paycheck, the amount of social security taxes withheld, and other deductions, such as unemployment and disability insurance.

Withholding taxes and social security taxes must be deducted from each employee's paycheck. The amount to deduct is listed in special charts provided by the federal government. When the employer sends withholding and social security taxes to the government, it is credited to the employee by using the employee's social security number. At the end of the year the employer sends each employee a W-2 form, a statement of wages paid and taxes withheld. Three copies of the form, to be used in paying income taxes, are sent to each employee. These copies must be provided to the employee on or before January 31.

Federal income taxes must be withheld from employee's wages. In addition, many states have state income taxes which must be withheld. Some cities also have city income taxes, which, when withheld from the employees wages, help support the city government. Food service managers should check with local employment commissions concerning local employment tax regulations.

OTHER TAXES OR FEES

Several other taxes and fees must be collected or paid by food service establishments. These include sales tax, operator's licenses, and real estate and property taxes.

Sales Taxes

Most states have a sales tax, a certain percentage of the purchase amount. The sales tax is added to the amount of the purchase made within that state. Some city governments also impose a city sales tax on purchases. The food service manager must keep records of the taxes collected for state and city governments and provide receipts of these to the proper government. City and state taxes are usually paid quarterly. In some states certain types of food sales are exempt from sales tax.

Operator's Licenses

Most states and cities require food service operations to obtain and maintain a valid operator's license to serve food and beverages to the public. Because of the variations which exist from state to state and city to city, it is wisest to check with the local municipality for laws regarding licenses.

Real Estate or Property Taxes

Real estate taxes are assessed to provide revenue for local services such as schools, fire and police services, and local governments. Revenue from real estate taxes may also be used for city projects like street and sewer maintenance, or building or maintaining parks.

The tax levied is based on the revenue needed by the local government to provide the services desired. Real estate taxes are usually a percentage of every $100 or $1000 of the ***assessed value*** of the property. The assessed value will vary from a small percentage to the full market value of the property, depending on the area. For example, the Anytown Restaurant is worth $225,000. This is the full market value of the property. Appraisals are made only on the property and the building, not the contents of the building.

If the assessed value of the Anytown Restaurant is 40 percent of the market value, the food service manager pays real estate taxes figured on $90,000. The ***tax rate*** is the formula used to determine the amount of taxes owed on property. If the tax rate for the Anytown Restaurant is $32 per $1000 of assessed value, the real estate taxes to be paid are $2880.

$$\frac{\$90,000}{\$1000} = 90 \times 32 = \$2880$$

If the tax rate for the food service operation is \$6.215 per \$100 of assessed value, the real estate taxes due are \$5593.50.

$$\frac{\$90{,}000}{\$100} = 900 \times \$6.215 = \$5593.50$$

If the tax rate is 5.5% of the assessed value, the food service manager must pay \$4950 in real estate taxes.

$$\frac{\$90{,}000}{\$100} = 900 \times 5.5 = \$4950$$

TAX RECORDS

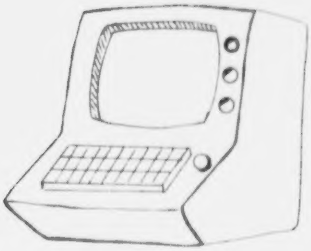
The profit or net income of a food service operation is the amount of money taken in above expenses before taxes. Taxes often represent a substantial portion of the food service operation's expenses. In most cases, it is a good practice for the food service manager to engage the services of a licensed accountant to assist in keeping accurate financial records. In summary the local, state, and federal taxes most often paid by food service are

Federal	Employee Federal Withholding Tax
	Income Tax
	Social Security
State	Employee State Withholding Tax
	Income Tax (not in Texas)
	Sales Tax (not in all states)
	Various Licenses
Local	Employee City Withholding Tax (not in all cities)
	City Income Tax (not in Texas)
	Real Estate Property Tax
	Occupational Tax
	Various Licenses

Computers in Food Service

Since 1965, computers have been making significant inroads in the business community, including food service. Because of the many uses of computers in food service, the food service manager should be aware of the way in which computers are used in food service, how computers can make the food service operation more efficient, and what guidelines to follow in selecting a computer system.

Computers have ushered in a new era in retailing. Customer services have been increased and costs lowered through the use of computers. Business applications for computers in food service include billing and invoicing, accounting, order processing, payroll management, word processing, economic forecasting, delivery scheduling, inventory control, sales analysis, managing employee schedules, dietary analysis, education, and diet preparation.



COMPUTER APPLICATIONS

Computer equipment consists of two major components: the first is ***hardware***, the computer, printer, video display, keyboard, or other nuts and bolts type of equipment; the second component, ***software***, or ***computer applications*** for business functions, refers to sets of instructions which enable the computer to work or process information.

Computer applications or programs for food service are varied and usually represent substantial savings of time and money to the food service manager. One of the most common uses of computers in business, including food service, is the logging of employee hours and benefits and the preparation of the payroll, including the writing of the checks.

Computerized cash registers are the most common use of computers in food service. These machines serve many purposes. Computerized cash registers can keep track of the number of times a menu item is ordered each day, figure each customer's bill, tally the daily income, and figure the amount of sales tax collected. If the food service operation is part of a larger chain or group of food service operations, each facility's cash register can be tied to, or networked to, a bigger central computer. By doing this, regional business managers are able to compare each operation's business transactions within a matter of hours.

While individual software packages can be purchased for the financial management of the food service operation, complete software packages can be purchased which can totally computerize the financial management of the food service operation.

The larger, complete systems are most often integrated programs. An ***integrated software program*** includes business applications which can be used separately as well as an internal system which allows the computer user to link the applications together. This allows the user to draw information from one application to be used in another or switch between applications in a less time consuming manner.

In food service, as well as other industries, integrated software packages exist for various accounting purposes. These include payroll, accounts payable, purchasing, inventory, accounts receivable, order processing, and a general ledger. The complexity of the computer system and the program will vary, depending on the needs of the food service operation. Computer programs which are as complete as the one described above are more expensive and often require a microcomputer with a large memory capacity.

The integrated accounting applications can greatly increase the efficiency of the food service operation, reduce error in inventory and financial management, and provide readily available data for use in the economic forecasting of the food service operation.

Many of the newer food service applications include programs which assist in preparing menus, track how often certain food items have been served, and the popularity of each. Integrated with this is a recipe planning application. For some programs, data bases within the program may store up to several hundred recipes in various categories, such as entrees, appetizers, and desserts. Usually, the food service manager can add his/her own recipes to this data base. To facilitate the usability of the recipe planning function, these programs offer the option of printing copies of recipes for use by food production personnel. The use of computers to help inventory is common in food service today.

Hospital food service operations often select computer applications that provide a tracking system of the patients and their individual dietary needs. Specialized computer programs are available which, when the patient's food intake is entered into the computer, analyze the diet for specific nutrients. Similar to menu planning in restaurants, computer programs are available for the menu planning of special diets, such as diabetic, and low fat diets. Some programs can provide the patient with a month's worth of menus, recipes, daily menu notes, and a shopping list. Frequently, computers are used in hospitals and clinics for patient education in nutrition.

SELECTION OF EQUIPMENT AND APPLICATIONS

Computer software, particularly those produced for business, are seldom inexpensive. As the program becomes capable of doing more, it becomes more expensive. With the wide variety of hardware and software available, food service managers must be able to determine the computer needs of the food service operation as accurately as possible. Some general guidelines to follow when selecting computer hardware and software for food service operations are listed below:

- Clearly define the needs of the food service operation.
- Project the future needs of the food service operation.
- List in priority the needs of the food service operation.
- Specify how much money the food service operation can afford to spend on computer equipment and software.
- Talk with other food service managers about their computers and the applications they have used or examined.
- Keep a file of their comments, reviews from computer magazines, reviews from industry journals, and your evaluations.
- Talk with local computer dealers.
- Contact hardware and software dealers directly, using computer magazines to locate addresses.

- Evaluate the operator's manual, or ***documentation***, for the software to see how easy the software may be to use and how well it meets the needs of the food service operation.

- See the software demonstrated and use it *before* buying.

- Check to see how much follow-up support is available for problems and answers to questions after the purchase.

Selected wisely, computers and computer software can make the food service operation effective, efficient, and financially sound.

Points To Remember

- Accounting and recordkeeping are important parts of the food service operation's control system.

- Accounting and recordkeeping include budgeting, accounting, cost control, and money handling.

- The financial stability of the food service operation can be affected by a variety of factors.

- The balance sheet and the profit and loss statement are the most commonly used financial statements in food service.

- The balance sheet is an up-to-the-moment picture of the food service operation's financial status.

- The balance sheet compares the food service operation's expenses and food costs against total sales.

- The assets of the operation are the things owned or in possession of the food service operation that have monetary value, such as cash, inventory, and money owed to the food service operation.

- The liabilities of the food service operation are items which are a cost to the food service operation.

- The profit and loss statement is a summary of the food service operation's business transactions during an accounting period.

- The gross profit is money left after the cost of the food sold is subtracted from the total sales.

- Net profit is money left after salaries and other expenses such as overhead are subtracted.

- Break-even analysis determines where income and expenses are equal.

- Break-even analysis is figured from variable and fixed costs.

- Variable costs include all changeable costs, usually expenses that change as sales change.

- Fixed costs are expenses that remain stable over time and are unaffected by changes in sales.
- Timely and accurate employer records must be kept.
- Employee records include employee schedules, time cards or records, and employee-related taxes.
- Several types of taxes must be paid by a food service operation.
- Other taxes or fees that the food service operation is responsible for include sales tax, food and beverage license fees, and real estate or property taxes.
- Computers have helped simplify the food service industry and increase its profitability during the past 20 years.
- Computer applications for food service include payroll, accounts payable, accounts receivable, order processing, purchasing, inventory, and general ledger.
- Computers may also be used for menu preparation, dietary analysis, and patient nutrition education in hospital or clinic settings.
- Computerized cash registers are the most common form of computer used in food service. They can be used to total the customer's check, keep count of the number of times each menu item is ordered for the day, total the day's sales, and the total day's sales tax collected.
- Clearly defined guidelines will help food service managers select the best computer system and software for the needs of the food service operation.

Words To Know

accounts payable
accounts receivable
assessed value
assets
balance sheet
break-even analysis
computer applications
current assets
depreciation
documentation
employee schedules
fixed assets
fixed costs
gross profit
hardware
integrated software program
liabilities
net profit
occupational expenses
owner's equity
primary expenses
profit and loss statement
real estate taxes
software
tax rate
time cards
time records
total assets
variable costs

Questions For Review

1. What are three possible causes of low income in a food service establishment?
2. What are four possible solutions to low income in a food service establishment?
3. What financial statement shows the net worth of a business operation?
4. What is the difference in accounts receivable and accounts payable?
5. What is the difference in current assets and fixed assets?
6. What is the difference in gross profit and net profit?
7. Explain the purpose of the profit and loss statement.
8. Explain how to figure break-even point.
9. What employee records must be maintained?
10. What federal, state, and local taxes are often paid by food service establishments? List three for each category.
11. What taxes are typically withheld from employees' wages?
12. List 10 business applications for computers in food service.
13. What is the most common use of computers in food service?
14. Describe special computer applications for hospital food service.
15. List guidelines for selecting computer hardware and software.

38

Chapter Thirty-eight Personnel and Production Management

COMPETENCIES TO DEVELOP

- Identify procedures used to plan, interview, hire, evaluate, and discharge staff.
- Train personnel, and enforce policies of personal hygiene, sanitation, and safety.
- Prepare work schedules and job assignments.
- Evaluate use, cost, ease of preparation, and aesthetic qualities of foods.
- Plan, coordinate, and supervise production.
- Set production standards.
- Control and improve sequence of operations.
- Schedule food preparation tasks.

OBJECTIVES TO ACHIEVE

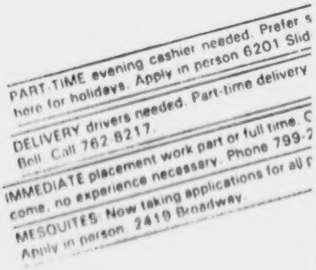
- Outline procedures for hiring and training new employees.
- Describe techniques for developing and coordinating work schedules and assignments.
- Identify factors that influence the development of work schedules and assignments.
- Outline procedures for firing or laying off employees.
- Describe methods for controlling labor costs in food service.
- Determine the benefits derived from effective methods of production and quality control in food service.

One of the most important elements in a successful food service operation is the staff. Considerable time and effort is required to recruit, hire, and train qualified food service workers. Once employed, these workers are keys to carrying out various cost controls, maintaining quality control and developing and maintaining good customer relationships.

Personnel Management

The process of hiring and training staff is known as ***personnel management***. Personnel management includes organizing staff assignments, delegating responsibilities, motivating employees, communicating with employees, enforcing rules, disciplining employees, controlling employee absences, and discharging employees when necessary. Good employees are essential for achieving the organizational goals of a food service operation.

RECRUITING



PART-TIME evening cashier needed. Prefer s
here for holidays. Apply in person 6201 Slid

DELIVERY drivers needed. Part-time delivery
Bell. Call 762-8217.

IMMEDIATE placement work part or full time. C
come, no experience necessary. Phone 799-2

MESQUITES: Now taking applications for all r
Apply in person. 2419 Broadway.

As new food service employees are needed, they are usually recruited through newspaper advertisements or by word-of-mouth through food service employees currently on staff. As the training level for the position increases, the food service manager may opt to advertise the position in food service trade journals and through local culinary or hospitality programs at colleges and universities. Many times, people will voluntarily come into the food service operation and ask to complete an application for employment. "Walk-ins" such as these often represent good sources of future employees and should be carefully considered.

It is wise to not rely on "word-of-mouth" job advertising. This type of recruiting may result in narrow cliques forming among the food service workers and may disrupt the food service operation.

HIRING

Many challenges face the food service manager in finding and keeping good food service workers. Some of the challenges are listed below:

- Finding skilled workers.
- Creating favorable working conditions.
- Identifying techniques to increase productivity rates.
- Developing attractive wage and benefit packages.

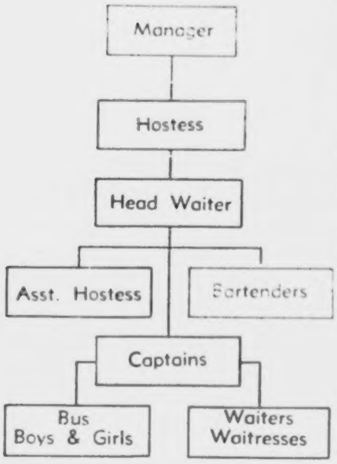
To operate effectively, the food service manager must hire employees who have or can develop the needed skills. Competitive wages and benefits must be offered to attract qualified people. Prospective employees must be carefully screened with reference checks conducted to reduce the chances of hiring undesirable employees.

When interviewing a prospective employee, the food service manager should not let personal likes and dislikes influence the decision to hire the person. In case questions arise later about the applicant, a record of the interview should be kept whether or not the employee is hired.

The decision to hire an applicant is usually based on the applicant's previous experience, personality, personal hygiene, and the interviewer's perception of the applicant's ability to learn the tasks of the job.

Within reason, food service managers should try to match the applicant with the job(s) available. The employee's needs and aspirations should be considered when hiring and in determining the work load. If worker's believe they are not adequately compensated for their work, they may reduce their production to adjust their output to the benefits they receive.

Most jobs in food service are both physically and mentally demanding. Finding ways to improve working conditions can be both challenging and rewarding to the food service manager. While the manager may not be able to eliminate the need for workers on holidays and weekends, these situations often meet the needs of people who, for personal reasons, need to, or prefer to, work these days.



Staffing tables outline the numbers and types of workers needed. In food service, a certain number of workers are necessary to meet a potential customer load. If the customers don't actually come in, the staffing table should be adjusted for a more realistic customer load in the future. Factors which help determine the staff necessary to serve potential customers include the hours of operation, the menu offered, and the type of meal service used. Various federal regulations and union contracts may also influence the staff required by a food service operation.

Job descriptions are important in developing an effective hiring process. The ***job description*** is a detailed description of the job, its responsibilities, and its requirements. Well-written job descriptions enable the food service manager to hire staff more effectively and realistically. Also, prospective employees have a better understanding of what is expected of them. This may increase employee job satisfaction and reduce labor turnover.

When writing job descriptions, food service managers should consider future changes which may affect the position. Factors such as the purchase of new equipment, menu changes, variations in customer tastes and patronage, and more effective production techniques may significantly alter an employee's job description. Because of this, food service managers should periodically review job descriptions to ensure that they reflect the true nature of the position. While not the only tool used for effective hiring, well-written job descriptions can help determine acceptable salaries, simplify job tasks, and lessen confusion about the expectations of the job.

ORIENTATION

New employees should be trained carefully. To help new workers get started, an orientation should be provided. Some items to include during orientation are included in the list below:

- Explain the type of operation used and the contribution the worker will make.
- Inform the worker about benefits, such as vacation, sick leave, meals, and insurance.
- Introduce the new worker to co-workers and supervisor.
- Provide a tour of the facility pointing out restrooms, lockers, and where the employee will work.

EMPLOYEE
MANUAL

- Explain routines, rules, and safety and sanitation regulations. Provide a copy for the employee's reference. These may be in the form of a Policy and Procedures Manual.
- Introduce the employee to the job to be done. Show the worker where to obtain the food, supplies, tools, and equipment needed; how to perform each task; and what to do with finished products and waste.
- Check each new employee's work periodically. If problems occur, additional training and assistance should be provided.

A skilled or previously trained worker may need a less thorough orientation than an unskilled worker. In any event, it is important that an orientation be conducted with each new employee. Orientation serves to welcome the new employee, helps put them at ease, and provides them the opportunity to ask questions and clarify any points on policies, procedures, or tasks related to the job.

TRAINING

Training is necessary for new workers. Additional training is necessary when procedures change, new equipment is purchased, or new facilities are opened. The purpose of retraining in these situations is to change the way a worker carries out a procedure. To be effective the worker must see the need for the change and want to change. To make the most of training time,

- explain to the worker why training is needed.
- let the worker help set goals.
- try to teach a complete task in one session.
- teach tasks in the order in which they are completed.

- encourage questions.
- stress the positive and pleasant aspects using praise and ego-building techniques.
- stress key points and reasons for each step.
- keep training sessions short, 15-20 minutes each.
- allow time for practice.

SCHEDULING

Once staff has been hired and adequately trained, the next step is to schedule personnel to fit the work load. Production requirements vary from meal to meal, day to day, and week to week throughout the year. Because of these variations in meal production, food service managers must develop ways to predict patterns of meal production for given periods of time. Once food service managers know approximately what the food production requirements are, staff may be scheduled. Several techniques may be utilized in production scheduling:

COOKS' MORNING PRODUCTION SCHEDULE

Employee	1. Mary
6:45 to 8:00	Check refrigerator for leftovers. Put on (1st) beef roast. Prepare braised beef
8:00 to 9:00	Cook potatoes and carrots for stew. Prepare all gravies and sauces.
9:00 to 10:00	Put on (2nd) beef. Bake (1) ham. Bake lasagna. (48 orders)
10:00 to 11:00	Bake veal steaks (30 orders) Set up counter. Put on (3rd) beef.

- **Split-shift scheduling**. Workers not needed are released between meals. This type of scheduling is often used for servers.
- **Irregular scheduling**. Starting times vary from one worker to another and from day to day. This type of scheduling is used to increase efficiency and avoid overworking or greatly inconveniencing any worker.
- **Use of part-time workers**. Part-time workers are often used to increase the staff during peak work loads. Additional personnel are often needed for large catered functions.
- **Use of staffing tables**. Previously discussed, these tables aid in scheduling workers by predicting the number of guests expected each day for each meal.
- **Labor cost budgets**. Some budgets aid in scheduling by allotting a given amount of money for a given volume of sales. Budgets are based on past labor and sales figures.[1]

Caterers often prepare detailed employee and production schedules for each function. These procedures are necessary to ensure the success of the function and to control costs.

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[1] Stokes, John W. *How to Manage a Restaurant or Institutional Food Service*. Dubuque, Iowa: Wm. C. Brown Co., Publishers, 1967. pp. 241-243.

PROMOTIONS

When job descriptions are developed, lines of promotion should be identified, generally from jobs of lesser importance to those of greater importance and responsibility. The decision to promote an employee should be made based on the employee's ability to complete his or her current job tasks, the scope of the tasks involved in the new job, and the employee's ability or willingness to learn the tasks of the new job. Employees should be made aware of promotion opportunities and offered horizontal promotions as well as vertical promotions. ***Horizontal promotions*** are promotions to jobs that have different duties at the same levels of responsibility as the job the employee currently holds. ***Vertical promotions*** are to jobs that have different duties and greater levels of responsibilities than the job the applicant currently holds. Horizontal promotions may also involve the ***transfer*** of the employee from one department or division of the food service operation to another department or division.

SEPARATIONS

There are three types of job separations:

1. ***Firing*** - when an employee is permanently released from job duties because of a violation of rules, regulations, theft, or other such action. Firing is a management decision.

2. ***Layoffs*** - when, due to economic conditions, employees are released from their job duties for a specific or indefinite period of time. Most often, layoffs occur when the business can no longer afford to keep the employee on the payroll, but wants to retain the option of putting the employee back to work in the future. Layoffs are a management decision.

3. ***Voluntary separation*** or ***quitting*** - when the employee decides he or she no longer wants to work for the company, for whatever reason.

Depending on the circumstances surrounding the separation, employees may be entitled to various types of benefits. Unemployment benefits may be drawn by an employee if he or she is fired or a viction of a lay off. If the employee is a member of a union, the employee may also be eligible for union benefits.

Regardless of the reason for the separation, each employee should be given an ***exit interview***. An exit interview provides the employee the opportunity to share with the food service manager information concerning the job, working conditions, and any problems encountered by the employee. The food service manager should take advantage of the information shared by the employee. Exit interviews may reveal major flaws in the operation. The alert manager will examine this information and work to take corrective actions where appropriate and feasible.

Employee Work Schedules and Assignments

If a food service operation has major staffing problems that remain unresolved, the operation may suffer financial losses. In addition, employees will become exhausted, both physically and mentally. While a certain amount of peak production rush is expected, the majority of the food service employee scheduling should facilitate the maximum use of materials and human energies.

The various types of scheduling commonly used by food service were discussed earlier in this chapter. When developing work schedules, food service managers must be aware of the following factors which may influence the scheduling of employees:

- Peak production and service periods.
- Hours of operation.
- Layout of the facility; production and service facilities.
- Current labor costs of facility.
- Needs of employees in terms of student schedules, vacation, and sick leave time requested.

Controlling Labor Costs

Labor costs have become an increasingly important part of the food service operation. In many instances, labor costs are greater than food costs. Labor costs include all expenses related to employment of a worker. These expenses include administrative expenses, salaries and wages, vacation and holiday pay, employee's meals, social security taxes, workman's compensation insurance, health, and life insurance. These expenses must be totaled to find actual labor costs.

Cost comparisons are a useful means of checking actual labor costs. Stokes gives these examples of labor cost comparison methods:

- ***Profit and loss statement***. Labor costs are divided by total sales to find the labor cost percentage.

- ***Comparisons between operations***. Compare costs of several establishments in a chain to show differences in labor cost percentage and labor cost per meal.

- ***Person-hour comparison***. The total hours worked by all employees for one period can be compared with another period. This provides a useful means of comparison even when wages have changed.

- ***Person-hours per 100 meals served***. The total hours worked by all employees is figured for every 100 meals served.

- ***Sales per person-hour***. The income from sales is divided by the number of hours worked by employees for that period.

- ***Hourly sales and person-hours***. A graph or chart is used to show sales and number of customers, gross profit, labor cost, and labor cost percentage each hour. The information is used to determine the best opening and closing hours and to schedule workers during peak and slow periods.[2]

The food service manager may be able to reduce labor costs by using one or more of the following techniques:

- Use machinery to replace or assist workers.
- Rearrange equipment, kitchen, and service areas to save steps.
- Use work simplification procedures in all tasks.
- Reschedule workers to meet demands at peak and slow periods.
- Encourage employees to help find ways to save time and energy, and to work together.

While basic work simplification techniques can help control labor costs, two items are frequently used to significantly reduce labor costs. These are the job description and the production schedule.

JOB DESCRIPTIONS

Job descriptions have been discussed in relation to their effectiveness in the hiring process. A job description is a detailed description of the job, the job's responsibilities, and the job's requirements.

Before the job description can be written, a job analysis and a task analysis must be done. ***Job analysis*** identifies the tasks performed by each worker. ***Task analysis*** identifies the steps in performing each task. Questionnaires, interviews, and observations are used to gather this information. The information is used to write the job description.

Through the process of job and task analysis, food service managers can identify essential tasks necessary for efficient food service operations, eliminate or reassign certain tasks, and identify tasks that may be best done through other methods, such as equipment utilization or use of convenience or specialty foods. By clearly defining the job through job analysis and task analysis, the food service manager increases the likelihood of employee satisfaction and achieving a good job-employee fit.

PRODUCTION SCHEDULE

A production schedule provides a record of the foods prepared for a meal. Before the meal is prepared, management uses past records to decide how many servings of each menu item should be prepared. Recipes are prepared in amounts to yield the number of servings needed. Any variation in the yield is also recorded, as are the number of customers served and the amount left over. This record aids the manager in planning use of leftovers and the number of servings to prepare for the next meal. The following example is a sample production schedule.

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[2] Ibid, pp. 243-247.

Production Schedule

Station ______________________ Workers ______________________
____
____
Manager ______________________
____

Number of Servings Prepared	Menu Item	Expected Yield	Actual Yield	Number Served	Amount Left Over
50	Meat loaf	50	47	35	12
50	Fried fish	50	51	48	2

Production schedules are used by food service managers to determine the best utilization of available labor. They also help determine what items may be more popular and profitable for the food service operation.

Production and Quality Control

Production and quality controls are usually considered as a single working unit. Methods of production affect quality and the quality desired will influence the method of production used. Food service managers should be aware of the relationships between these two food service control processes and the benefits derived from each.

PRODUCTION CONTROL

The production of menu items should be carefully planned. Past sales are the best indicators of the quantities needed. If too much food is prepared, waste and loss may result. Working leftovers into the next meal is often difficult. Leftovers reduce profits because they require extra handling. If too little food is prepared, serving problems, delays, and unhappy customers may result.

Portion control is influenced by, and influences, the menu in three ways: (1) the form in which the portion is purchased (prepared or preportioned); (2) the volume of food purchased; and (3) the container size in which foods are purchased.

Some portion control is maintained during food preparation when ingredients are weighed and measured. Standardized recipes identify expected yield and may require that the food be divided into portions during preparation. However, most portioning is done during serving. If portions served are too large, food costs increase and profits shrink; if portions are too small customers may feel cheated, become dissatisfied, and not return to the food service operation. Portioning tools should be specified for each menu item served. Tools commonly used for maintaining portion control are portion scales, scoops, ladles, and markers.

QUALITY CONTROL

Because it is essential for customer satisfaction, quality of food preparation and service cannot be overemphasized. Quality must be monitored in the purchasing, storage, preparation, and holding of food. Poor quality at any point will reduce customer satisfaction.

The quality of a food purchased is often related to the cost of the food. In addition, food costs are affected by the following items:

- The quality of ingredients used.
- Use of adequately trained employees.
- Use of standardized recipes.
- Careful production control.
- Adequate portion control.
- Quality of holding service.
- Control of the use of leftovers.
- Control of the transportation of foods, especially in catering operations.

BENEFITS OF PRODUCTION AND QUALITY CONTROLS

Production and quality controls are important to successful food service operations. Some of the benefits derived from effective production and quality controls are

- **Increased customer satisfaction**. When customers perceive that they are consistently getting good quality foods, at reasonable prices, in portion sizes which are reflective of the restaurant and the prices charged, they often will return. This repeat business or "customer loyalty" helps the food service operation become financially successful.

- **Good public relations**. Satisfied customers will convey their satisfaction to friends and family. "Word-of-mouth" advertising by pleased customers helps increase business and profits.

- **Establishment of standards**. When production and quality controls are developed, they serve as benchmarks or standards by which products are judged. If a product does not meet the standard, the food service manager may take steps to correct the problem.

- **Support for other cost control systems**. No cost control technique stands alone. Labor, food, and production cost controls are interrelated. A weak link in one control mechanism will affect other control systems. Information derived from one control system may be necessary for the effective operation of another control system. Therefore, it is to the food service manager's advantage to develop and monitor each cost control system separately and as a unit.
- **Establishment of high production and quality levels for employees to model**. When clearly defined, production and quality controls help direct employee actions and strengthen their sense of responsibility for maintaining the quality of foods served.

Points To Remember

- Personnel management is the process of hiring and training staff.
- Personnel management includes organizing personnel, delegating responsibilities, motivating employees, communicating with employees, and disciplining employees, if necessary.
- Getting and keeping good food service workers is difficult.
- Most food service employees are recruited through newspaper ads and by "word-of-mouth" through other employees. "Walk-ins" are also an excellent source of potential employees.
- Competitive wages and benefits and careful screening help reduce the chances of hiring undesirable employees.
- Staffing tables outline the numbers and types of food service workers needed by a food service operation to carry out its functions.
- Labor costs may be reduced by several techniques including work simplification techniques, mechanization, and employeee rescheduling.
- Job descriptions and production schedules are two tools frequently used to reduce labor costs.
- Job descriptions provide a detailed outline of the job, its reponsibilities, and requirements.
- Each new employee should receive an orientation to the job to introduce the employee to the job and receive answers to any questions he or she may have about the job.
- Training must be provided to new workers and to all workers when procedures change, when new equipment is purchased, or when facilities are opened.
- Several production scheduling techniques may be used by the food service manager.

- Employee promotions may be either horizontal or vertical.
- Lines of promotion should be identified when job descriptions are developed, generally from jobs of lesser importance to those of greater responsibility and importance.
- Factors which influence employee scheduling include the hours of operation, peak production and service periods, facility layout, current labor costs, and employee needs.
- Job separations include firing, layoffs, and voluntary separation or quitting.
- Each employee should be given an exit interview. This provides the employee the opportunity to share with the food service manager information related to problems encountered by the employee.
- Labor costs have become an increasingly important part of the food service operation.
- Labor costs include all expenses related to the employment of a worker.
- Job analysis and task analysis provide detailed information from which the job description is written.
- Production schedules provide records of the foods prepared for a meal and are used to help schedule employees and control labor and food costs.
- Many factors influence the quality of a final food product. Food service managers should be aware of these factors and help control them.
- Portion control is an important part of food cost control, food preparation, and service.
- Food service managers should utilize effective cost, production, and quality controls to ensure the financial success of the food service operation.

Words To Know

comparisons between operations
exit interview
firing
horizontal promotions
hourly sales and person hours
irregular scheduling
job analysis
job description
labor cost budgets
layoffs
part-time workers
person-hour comparison
person-hours per 100 meals served
personnel management
quitting
sales per person-hour
separations
split-shift scheduling
staffing tables
task analysis
transfer
vertical promotions
voluntary separation

Questions For Review

1. In a food service establishment, who is responsible for cost controls, maintaining quality control systems, and developing and maintaining good customer relationships?
2. List four challenges that food service managers face in finding and keeping good food service workers.
3. Why is it important to match job applicants with the jobs available?
4. List four factors that affect staffing tables.
5. Why are well-written job descriptions important to food service employees and food service managers?
6. What information should be presented during new employee orientation?
7. List three situations in food service when additional training of employees is needed.
8. List five techniques managers may use in production scheduling.
9. What lines of employee promotion are available in food service?
10. List and describe three types of job separations.
11. What responsibilities does the food service manager have regarding firing or layoff of employees?
12. What expenses should be included in labor costs?
13. Explain each of the following labor cost comparison methods:
    a. profit and loss statements
    b. comparisons between operations
    c. person-hour comparison
    d. person-hours per 100 meals served
    e. sales per person-hour
    f. hourly sales and person-hours
14. What is the difference between a job analysis and a task analysis?
15. What items should be included in a production schedule?
16. List eight items that contribute to quality control.
17. At what stages of a food service operation are portions controlled?
18. List five benefits of production and quality controls.

39 Chapter Thirty-nine Merchandising and Public Relations

COMPETENCIES TO DEVELOP

- Arrange, design, and interpret menu sheets or folders.
- Evaluate use, cost, ease of preparation, and aesthetic qualities of foods.
- Apply merchandising techniques to ensure profit.
- Plan and conduct advertising and promotional programs.
- Handle complaints and human relations problems.

OBJECTIVES TO ACHIEVE

- Analyze procedures for effective marketing programs.
- Describe factors that affect the merchandising of the food service operation.
- Discuss common and profitable merchandising techniques.
- Discuss the relationship between advertising and promotional programs and public relations.
- Summarize techniques used to handle complaints and human relations problems.

In today's marketplace, it is a rare food service operation that is financially successful without some type of merchandising. The food service manager must understand marketing strategies, how to use them effectively, and how a well-planned merchandising program can boost sales and foster good public relations.

Merchandising Food Service - Outside Merchandising

Merchandising means presenting the merchandise in such a manner that people buy it. In food service the merchandise includes the food, service, prices, and surroundings. Merchandising activities include advertising, sales promotion, and showmanship.

MARKETING PROGRAMS

When developing a marketing program, the food service manager must study three factors:

- the product
- the market
- the characteristics of advertising, promotion, and public relations which help bring the market to the product.

Only when all three factors have been considered can the food service manager develop an effective and appropriate plan for merchandising the food service operation.

PRODUCT STUDY

The ***products*** offered by a food service operation are its food, service, prices, and surroundings. Before food service managers can begin to develop a merchandising strategy, they must know and understand the products their food service operations offer.

Because merchandising involves the total food service operation, food service managers should check

- **Location**. Is the location convenient with adequate parking available? Are any historical or cultural values of the building, site, or area being used to advantage?

- **Appearance of building**. Is the building clean and attractive on the outside. Does the building have an inviting appearance?

- **Outside sign**. Does the sign quickly identify the business? Is the sign appropriate and does it meet local codes relating to outdoor advertising? Can the sign be seen easily?

- **Entrance**. Is the entrance clean and inviting?

- **Public areas**. Are the lobby, restrooms, and dining areas attractive and comfortable? Is the decor distinctive? Is the temperature comfortable without drafts? Is the lighting adequate? Does light glare through the windows? Is the building unpleasantly noisy?

- **Food**. Is the food different from similar food service places? Is the food consistently good? Is the food served attractively, at the proper temperature? Are the portion sizes appropriate?

- **Service**. Is the service prompt and pleasant?

- **Prices**. Do the prices fit the type of food service? Are the prices appropriate to the items served? Do the customers consider the prices to be reasonable for the type of food, service, and portion sizes served?

- **Capacity**. Is there adequate seating for customers? During "rush" periods, is there adequate seating available in a bar or lounge area? Are employees well-trained in seating guests, taking and checking reservations, and directing customers to waiting areas if seating is unavailable?

- **Staff**. In some situations, such as in chain restaurants, food service managers have little or no control over the type of meal service, type of food served, or the decor of the food service operation. A well-trained, efficient, and hospitable staff can help create a warm, pleasant atmosphere for customers. This type of personal selling may be most important in developing an effective merchandising campaign. Is the staff well-trained, efficient, and hospitable?

MARKET STUDY

A ***market study*** finds out who is buying or might buy the product. A market study will also determine where potential customers are and what their food preferences might be.

To conduct a market study, food service managers should progress through the following steps:

1. **Define the type of food service operation**. Is the food service operation a fast-food franchise, a downtown lunch-only diner, a'haute French cuisine restaurant, a street corner hot dog stand, a Western style steak house, or a family oriented cafeteria? Each type of food service operation will require somewhat different merchandising techniques to be successful. The food service manager must thoroughly understand the type of food service being offered.

2. **Identify potential customers**. The nature of the food service operation will help identify the people who are most likely to be potential customers. Local maps showing neighborhood shopping centers, businesses, and cultural areas are available from city administrative personnel. These should be studied to more accurately predict where potential customers may be found.

3. **Determine the characteristics of potential customers**. Information such as sex, age, level of income, job status and careers, religion, and family size are called ***demographic factors***. These factors more clearly describe the people who are potential customers. The closer a food service operation comes to meeting people's needs, the more likely the people are to becoming customers.

Information for this phase of analyzing the market may be obtained from a variety of sources. The Chamber of Commerce or civic organizations may be able to provide food service managers information about certain groups or areas within the community. The Chamber of Commerce or local convention bureau may be able to inform you of any special events which will be bringing potential customers into the area, even if for a short time. City government agencies may also be able to provide information about any new industries moving into the area.

Many food service managers prefer to collect market information directly from people they think might be customers. For example, a small neighborhood cafe may distribute short questionnaires to local families asking what characteristics they would prefer in a family restaurant, the family size, ages of family members, income levels, and times of the week the family usually eat out. This type of survey can provide food service managers with available information directly obtained from the ***target market*** or the people food service managers want to have as customers.

DEVELOPING A MERCHANDISING PLAN

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Once the product has been studied and the market analyzed, the merchandising plan may be developed. A merchandising plan generally includes advertising, publicity, and other techniques designed to inform and attract customers to the product.

Advertising is how the business lets customers know where the food service operation is and what it has to offer. Advertising is nonpersonal communication through a paid media by an identified sponsor. There are several types of advertising that may be used. The top five forms of advertising are listed below:

- **Newspapers** - the leader in the number of dollars spent in advertising and the strongest form of advertising.
- **Television** - the second strongest form of advertising but the leader in the overall cost of advertising.
- **Direct mail** - the third strongest method of advertising but is increasing in advertising power.
- **Magazines** - the fourth strongest means of advertising.
- **Radio** - the fifth strongest form of advertising.

Other types of advertising include ***outdoor advertising*** such as signs, billboards, and posters; telephone directory ads; telephone advertising; personal advertising; or promotional campaigns.

In deciding which method of advertising is the best to use, food service managers should consider the following process:

1. **Decide on the objectives of the advertising campaign**. The following list contains the three main purposes of advertising:
   - to inform the marketplace; create primary demand for the product.
   - to persuade the marketplace; create a desire within the marketplace among those people who would not choose the product as their first choice.
   - to remind the marketplace; reinforce the ideas of consumers toward the product as being desirable.
2. **Decide on the budget to be used for advertising**. Restaurants generally use between one and two percent of their total sales for advertising. Food service managers may decide on how much to spend on advertising in the following ways:

- Choose what is affordable.
- Use a certain percentage of sales.
- Use an amount that is comparative to the leading competitors.
- Decide on the amount or percentage awareness among customers and determine the amount of money necessary to reach this level. This method of advertising budgeting is referred to as the ***objective task method***.

3. **Decide on the message**. Every form of advertising has its advantages and disadvantages in its effectiveness in conveying a message. To maximize the advertising efforts, food service managers should follow the steps below:
   - **Generate the message.** Specifically, decide on what you want to tell the consumer.
   - **Evaluate and select the message**. In selecting the advertising message, the criteria for evaluation should include how well the message represents the product, how believable the message is, and how much the message is likely to move consumers to action.
   - **Determine the method of executing the message**. Should the message point out the basic facts of cost and quality; can the message be effective if it has a "fantasy" theme; should the message show people, like those the food service operation wants to attract, enjoying the food and hospitality of the business?

4. **Decide on the media**. Food service managers must carefully consider the cost of each form of advertising, the advantages and disadvantages of each, and compare these factors against how many customers will be attracted to the business and how much income will be generated as a result of the advertising campaign.

5. **Evaluate the effectiveness of the advertising campaign**. Careful records should be kept for each form of advertising used to determine the effectiveness of the technique. While there are several methods of determining advertising effectiveness, the evaluation should include a summary of the technique used, the dates of the advertisement, the location of the advertisement, the cost of the advertisement, and any special effects used such as full color newspaper ads. The food service manager should compare this information with sales records for before, during, and after each advertising campaign. Customers should be surveyed to determine if they've seen the ad, what they remember about it, and how the advertisement influenced their decision to patronize the food service operation.

Food service managers may want to use ***promotions*** periodically to attract customers. Promotions are short-term incentives to encourage the purchase of the product. In food service, promotions are generally related to the use of coupons or special meal combinations, such as giving away a free order of French fries with each hamburger sold. The same guidelines used to determine which advertising campaign to use are appropriate for determining which promotion campaign to develop. Sales promotions also include special celebrations, fashion shows, prizes, contests, and special prices.

Finally, some food service managers are effective in their use of ***publicity*** as a form of merchandising the food service operation. ***Publi-***

city is media attention drawn to the food service operation by some type of special interest project. Publicity is usually related to a community service-oriented act such as providing free meals for the needy during Christmas. If used wisely, publicity is an excellent method of merchandising the food service operation and developing good will for the food service operation.

Merchandising Food Service - The Inside View

An effective advertising or promotion campaign may bring customers to the food service operation, but the next major step is to keep them coming back. It is at this point that food service managers must become aware of the variables within the food service operation that influence the customers choice of foods and their decision to return to the restaurant.

THE MENU AS A MERCHANDISING TOOL

When presented to the customer, the menu can be a powerful merchandising tool for the food service manager. Today, menus are as varied as the food service operations they represent, from classic continental restaurants with leather-bound menus to sidewalk cafes whose menus are written on chalkboards in brightly colored chalk. Yet each type of menu "sells" the food and the establishment.

Because the menu is a form of selling, it is important for food service managers to know how to construct a winning menu format. Factors to consider when planning a menu format are

- **Materials**. The materials selected for the menu should be strong enough to withstand repeated handling and resist staining unless the menu is designed to be low cost and considered to be disposable. If the restaurant has a menu that changes daily, a heavy-duty, long-wearing cover with removable inserts may be desirable. In general, varnished covers or some plastic laminates should be avoided because of problems with these finishes cracking, giving the menu a shoddy appearance. The paper used for the menu should be a heavy-weight stock that is wear resistant.

- **Size**. While sizes vary from operation to operation, a folding menu about 6" by 8" up to 9" by 12" when opened, or a single-sheet menu 9" by 14", are considered acceptable sizes. The menu should, when opened, be easily handled by the customer and be large enough to contain the menu items in a legible size print.

- **Color and design**. The theme or decor of the food service operation should be carried through to the menu cover. If the locale is well-known for some reason, such as the Alamo or the Golden Gate Bridge, these themes may be used for menu covers. If the food service operation has a large repeat business, menu covers may be changed several times during the year to spark interest among customers.

The colors selected for the menu paper stock and the printing ink must blend well with the overall decor of the food service operation. For best visibility, contrasting colors of paper and print make reading easier. Colors such as drab grey or purple should be avoided as these colors are less appealing and may diminish hunger. Be aware of the interaction of some color combinations. In certain lights, some colors tend to fade or "wash out," making reading difficult.

- **Format**. The text of the menu must be clear and legible. Old English script may appeal to the food service manager but may be illegible to customers. The distance between the menu item and the price should be short enough to allow each item to be easily identified. Dotted lines, double spaces, and indentations may be used to create an attractive format and make reading easier.

- **Text**. The menu should always identify the name of the food service operation, its phone number, and the hours of operation. The arrangement of menu items should be in the order that they are usually eaten during a meal. English should be used to describe the food, unless foreign languages are correctly used, or the food service operation is a gourmet establishment specializing in traditional continental fare.

Descriptive phrases should be used to describe menu items to enhance their appeal to customers. Care should be taken that any descriptions used on the menu are truthful. If the food service operation advertises "fresh salmon steaks," it should not be serving "frozen salmon steaks." Listing methods of processing or preparation is acceptable, as is the place of a food's origin. Examples of these types of descriptive phrases are "honey-glazed carrots" or "Vermont maple syrup."

The use of color photographs of food on the menu is a good merchandising technique provided that the colors are true and the pictures illustrate the food in a flattering manner. Don't use a photograph that is of poor quality or otherwise discourages customers from trying menu items.

The food service manager must be sure that all words on the menu are spelled correctly. Also, any translations from one language into another language should be double checked for odd or offensive phrasing. Some phrases do not translate directly from one language into another.

Menu items should not be arranged in an obvious high-to-low pricing order. This type of text formatting sends a hidden message to customers that it is better to order the top, or higher priced items. The choice of a menu item should be left to the customer without any covert pressure from the management. Menus should be designed to sell food items, be appropriate for the operation, be within the food service operation's budget, and should be easily modified to neatly reflect any price changes.

Special Merchandising Techniques

Customers often look for and enjoy food presented in an elegant or unusual manner. Special merchandising techniques may be inexpensive yet provide a lot of interest for customers and increase profits.

Unique and effective methods for merchandising foods include

Showmanship - special ways of presenting foods to the customer. Showmanship may be as simple as serving a broiled steak on a sizzling platter or as elaborate as preparing Cherries Jubilee at table side. Food displays such as dessert carts, tastefully decorated buffet lines, and creative garnishes are good examples of showmanship. Costumed service personnel may also be a showmanship technique. Showmanship adds that special flare to food service.

Clip-ons - sheets clipped to the menu to sell a special item, such as the luncheon special or a new menu item. Folded cards which stand on the table are called ***table tents***. These frequently offer special desserts or beverages and are read by customers while they are waiting for their order to be taken or while they are eating. One well-planned table tent may boost the sales of an item, while more than one may create a cluttered appearance.

Point-of-purchase sales - those items placed next to the cashier's stand for customers to purchase as they pay for their checks. These items often include candy and gum, cigars and cigarettes, packaged foods, novelties, and gift items.

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CREDIT
GOOD THRU 1/86

Credit cards - may also promote sales. A 1980 National Restaurant Association study found that 89 percent of the restaurant owners surveyed accepted credit cards. Of those, 41 percent said that credit card sales accounted for 25 percent or less of total sales; 25 percent said that credit card sales accounted for 25 to 50 percent of total sales; and 17 percent said credit card sales accounted for 50 percent or more of the total sales volume.

Food service personnel - can do much to increase sale of food and beverages. Employees must be taught how to "sell through suggestion." When service personnel say positive things about the food, sales increase. When they remember to ask if the customer would like a beverage, soup, or dessert, sales increase. Servers must also be able to describe the food and preparation techniques used for each dish. A positive, polite, friendly attitude is the best asset that food service personnel can bring to the job.

Public Relations

Public relations are the measures a business takes to win community respect. Sound public relations must be based on quality food served by well-trained food service employees who take pride and satisfaction in their work. Public relations must be based on good management with good relations maintained between management and employees, customers, the community, and stockholders of the company.

There are close interrelationships between advertising, promotional programs, and a food service operation's public relations. If used properly, advertising and promotional programs can foster positive feelings toward the food service operations. Many messages sent to customers are silent ones. These include the gracious treatment of customers; the tactful handling of customer suggestions and complaints; the awareness of and meeting of customer's special needs, such as assistance to elderly and handicapped persons; the production of informative and professional advertisements; and the maintenance of quality food and service. The food service manager must be aware of the many ways customers and potential customers are influenced by various merchandising techniques and take steps to ensure that these techniques speak well of the food service establishment.

Customer Relations

The customer good will developed by quality foods and warm hospitality is priceless. Unhappy customers will often convey their displeasure by not returning to the food service establishment and by giving negative reports to neighbors, friends, and business associates. Managers should encourage customers to convey their complaints directly to the food service establishment.

A long-standing technique used for helping customers air their opinions about the quality of food and service is the ***customer suggestion or comment card***. Customer suggestion cards are usually placed on the dining table or at the cash register. When completed, the card contains the customers' opinions about the quality of the food and beverages, the quality of the service, the friendliness of food service employees (hospitality), and often, the cost of the menu items. Additional space may be provided for any comments the customer may wish to make related to the meal service.

The food service manager should take time to read each of these cards and evaluate the comments. While some comments may reflect one person's personal preferences, often customer comments reflect the opinion of the majority of the customers. When feasible, customer suggestions for change or improvement should be incorporated into the food service operation. Whether these changes can be made is a decision only the food service manager can make.

Food servers, hosts, and hostesses should routinely ask customers during or after meal service about the quality of the meal service and food, but should not interrupt conversation at the table to do so. This type of interaction often opens the way for customers to provide valuable feedback to food service managers.

Food service employees should be trained to handle customer complaints as calmly and diplomatically as possible. This is particularly important when customers are loud, abusive, or disruptive when voicing a complaint. Suggested techniques for handling various types of customers are discussed in Chapter 27, Basic Service Skills.

Points To Remember

- Merchandising is instrumental in the financial success of a food service operation.
- Merchandising involves the study of the product, the market, and the characteristics of advertising, promotion, and public relations which help bring the market to the product.
- The products offered by a food service operation are its food, service, prices, and surroundings.
- The merchandising of food service involves the location, building, food, service, and prices.
- A market study helps the food service manager determine who current customers are, who the potential customers are, and what their food preferences might be.
- Food service managers should follow a well-planned strategy with defined steps in developing a merchandising program.
- Information useful in conducting a market study may be obtained from city documents, the Chamber of Commerce, and potential customers.
- Advertising, promotion, and publicity are three major ways in which food service managers let customers know about the food service operation.
- Each type of merchandising has advantages and disadvantages. The food service manager must decide which method is the most effective in terms of meeting the merchandising objective and cost.
- Careful consideration should be given to the design of the menu as this is a constant merchandising tool of the food service operation.
- Special merchandising techniques such as showmanship, creative garnishing, menu clip-ons, table tents, and point-of-purchase sales can be very effective in boosting sales.
- Food servers should be taught the art of "selling through suggestion" as merchandising food and beverages boost sales.
- Food service managers should take specific steps to obtain customer feedback, handle complaints in an effective and timely manner, and build customer goodwill.

- There are many subtle and close interrelationships between a food service operations' merchandising program and its public relations. Food service managers should be aware of these interrelationships and work to maximize them.

Words To Know

advertising
clip-ons
customer suggestion or comment card
demographic factors
market study
merchandising
objective task method
outdoor advertising
point-of-purchase sales
products
promotions
public relations
publicity
showmanship
table tents
target market

Questions For Review

1. Define merchandising. What does food service merchandising include?
2. List three factors the food service manager should study when developing a marketing program.
3. What 10 factors should the food service manager check when making a product study?
4. What local organizations and agencies can be helpful to the food service manager in collecting demographic information about potential customers?
5. What is a target market?
6. List five forms of advertising. Which is the most expensive?
7. List the five steps to follow in the process of deciding which method of advertising is best to use.
8. Describe the characteristics of a food service promotion.
9. What are the characteristics of a menu that serves as an effective merchandising tool?
10. Give three examples of food showmanship.
11. How may acceptance of credit cards by a food service establishment be a merchandising tool?
12. What are the characteristics and results of a good food service public relations program?
13. Why is customer good will important to a merchandising program? List three techniques for promoting customer good will in food service.

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Index

A

- a la carte, 352
- a la mode, 295
- abbreviations,
  - used in recipes, 150-51
- abdominal thrust, 27
- accident prone, 16
- accommodator service, 412
- accounts,
  - payable, 463
  - receivable, 463
- activated charcoal, 167
- adipose tissue, 59
- advertising, 490
- albumen, see egg
- al dente, 256
- all-purpose flour, see flour
- ambulatory, 78
- American,
  - banquet service, 411
  - service, 374
- amino acids, 57
- antibodies, 57
- ants, see pests
- appetizer, 197
- as purchased, 151
- ascorbic acid, 61
- aseptic, 33
- aspic, 199
- assembly line,
  - in preparing,
    - appetizers, 202
    - sandwiches, 176-78
- assessed value, 467
- assets, 463
- attachments, 105
- attitude,
  - defined, 345
  - negative, 345
  - positive, 345
- au gratin dish, 95
- automated self-service, 397
- automatic beverage dispensers, 108

B

- back-of-the-house, 7
- bain-marie, 120
- baked,
  - Alaska, 295
  - custard, 294
  - souffle, 295
- baker's scale, 100
- baking,
  - defined, 111
  - pans, 93
  - powder, 279
  - sheets, 94
  - soda, 279
- balance,
  - scale, 100
  - sheet, 462
- balances, 99
- banquet,
  - carts, see carts
  - service, 375
- banquette, 383
- batter method, 284
- batters, 277
- Bavarian cream, 294
- beam-type scales, 134
- beaters, 105
- beef, 216
- bench-type manual can opener, see can opener
- Bettys, 293
- beverage station, 166
- binder, 186
- bins, 92
- biological hazards, 47
- bird pests, see pests
- biscuit method, 283
- blanching, 263
- blast freezers, 140
- blenders,
  - defined, 106
  - safety using, 106
- blind receiving, 133
- bone, 217
- booster stand, 363
- bowls, 92
- braiser, 93
- braising, 222
- bread,
  - types of,
    - croissants, 174
    - pumpernickel, 174
    - quick, 174
    - rye, 174
    - whole wheat, 174
    - yeast, 174
- bread flour, see flour
- breakfast, 69
- brewed coffee, 167
- broiler (equipment), 109
- broilers (poultry), 222
- broiling, 221
- broth, 155
- brushes,
  - types of,
    - bench, 91
    - grease, 91
    - kettle, 92
    - oven, 92
    - pastry, 91
    - pot, 92
    - vegetable, 92
- budding, 277
- buffable finish, 41
- buffet service, 375
- bulk food carts, see carts
- burns,
  - description of, 28
  - treatment of, 28
  - types of,
    - first-degree, 28
    - second-degree, 28
    - third-degree, 28
- burns and shocks,
  - preventing of, 17-18
- bussing cart, see carts
- butterfly, 227
- buyer, 450

C

- cafeteria, 3
- cafeteria service, 397
- cake,
  - method, 283
  - mixing of,
    - blending method, 313
    - conventional method, 313
    - creaming method, 313
  - pans, 94
  - types of,
    - angel food, 310
    - butter, 310
    - chiffon, 310
    - foam, 309
    - sponge, 310
- calcium, 62
- calories, 56
- can sizes, 152
- canapes, see sandwiches
- canned heat, 413
- canned meat, 218
- can openers,
  - types of,
    - bench-type manual, 101
    - electric, 101
- canvas liner, 304
- capons, 223
- car service, 412
- carbohydrate, 57
- Carborundum stone, 89
- carcass, 217
- carhops, 414
- carotene, 60
- carton, 263
- carts,
  - types of,
    - banquet, 95
    - bulk food, 95
    - bussing, 94
    - combination hot and cold, 95
    - heated, 121
    - hot and cold, 122
- cash,
  - drawer, 423
  - over, 424
  - register, 422
  - short, 424
- cashier, 422
- catered service, 411
- caterer, 411
- catering,
  - types of,
    - off-premises, 412
    - on-premises, 412
    - unit, 3
- cellulose, 58
- central kitchen, 3
- cereal,
  - types of,
    - instant, 255
    - pre-cooked, 255
    - ready-to-eat, 255
    - see also cereal grains
- cereal grains, 253
- chafing dishes, 94
- chalaza, see egg

- charlotte, 294
- cheese,
  - menu uses of,
    - au gratin, 247
  - terminology,
    - curds, 244
    - rennet, 244
    - ripened, 244
    - stabilizers, 245
    - sharpness, 244
    - unripened, 244
    - whey, 244
  - types of,
    - imitation, 245
    - natural,
      - parmesan, 245
    - pasteurized process cheese food, 245
    - process,
      - cold pack, 245
- check,
  - computing the, 421
  - tray, 422
- chef de rang, 374
- chemical,
  - hazards, 49
  - leaveners, 279
  - sanitizer, 38
- chest thrust, 28
- chiffon fillings, 337
- child labor laws, see state labor laws
- China cup, 93
- chloride, 63
- cholesterol, 59
- chopper, 103
- choux paste, 332
- chronic illness, 78
- citrus fruit, 61
- clarify, 242, see also clarifying
- clarifying, 206, see also clarify
- clean, 33
- cleanliness, 224
- closing duties, 362
- club breakfasts, 352
- cobblers, 293
- cockroaches, 41
- cocktail
  - defined, 170
  - types of,
    - beverage, 201
    - fruit, 201
    - seafood, 201
- coffee
  - brewer, 107
  - brewing of, 167-68
- colander, 93
- cold food server, 121
- cold food units, 121
- collagen, 61
- combination, 155
- combination hot and cold carts, see carts
- commis de rang, 374
- commercial dishwashing machines
  - defined, 123
  - types of,
    - conveyor-type, 124
    - door-type, 124
    - flight-type, 124
    - multiple tank, 124
    - single tank, 123
- commissaries, 3
- common name, 132
- compartment steamers, 110
- complete protein, 57
- computers,
  - applications, 469
  - hardware, 469
  - software, 469
    - integrated program, 469
- computing the check, see check
- condition, 224
- confectionary thermometer, see thermometer
- conformation,
  - in meat, 219
  - in poultry, 224
- congeal, 189
- connective tissue, 217
- contaminants, 35
- continental breakfast, 69
- convection steamer, 111
- convenience, 130
- converted, 254
- conveyor chain, 124
- conveyor dishwashing machine, 38
- conveyor toasters, 113
- cooked icings, see icing
- cook's forks, 91
- cool-rise method, 285
- core, 262
- cottage potatoes, 271
- counter service, 372
- counter worker, 372
- courtesy,
  - exhibiting, 351-52
- cover, 376
- cream,
  - puffs, 331
  - soda, 295
- creamed, 286
- cream-filled, 336
- credit terms, 454
- crimp, 335
- crimper, 92
- crisps, 293
- croissant, see bread
- cross-contamination, 34
- crullers, 331
- crustaceans, 227
- cured,
  - fish, 227
  - meat, 218
- current assets, 463
- custard fillings, 337
- custards, 294
- customer,
  - types of,
    - angry, 349
    - blind, 350
    - complaining, 350
    - dieting, 349
    - elderly, 350
    - ill, 351
    - indecisive, 349
    - intoxicated, 350
    - joking, 350
    - noisy, 349
    - overfamiliar, see joking
    - physically handicapped, 351
    - rushed, 349
    - young, 350
- customer comment card, 495
- cutlery, 88
- cuts,
  - prevention of, 17
- cycle menus, 76

D

- Daily Food Guide, 64
- dais, 410
- dealers, 455
- decanter, 107
- decorating,
  - bag, 320
  - tips, 321
  - tubes,
    - designs used, 321-22
- decorator's wheel, 319
- deep-dish pies, 331
- deep fat fryers, 109
- deep-frying, 222
- dehydrated, 265
- depreciation, 465
- demographic factors, 489
- dessert cart, 94
- dextrose, 58
- dial-type thermometer, see thermometer
- dicing, 266
- diet orders, 413
- diet therapy, 68, 79
- dietary,
  - guidelines, 66
- dining room,
  - arrangement of, 409-10
- dinner, 70
- disaccharides, 58
- dish machine racks, 124
- dishwashing,
  - manually, 37
- docked, 335
- double-action baking powder, 279
- double boiler, 93
- double-panning, 335
- dough hook, 105
- dough scraper, 92
- doughs, 277
- dressed, 227
- dried, 265
- dried yeast, 279
- drop batters, 277
- dry heat, 155
- dry measuring containers, 86
- drying agent, 124
- dumplings, 293
- durum wheat, 254

E

eclairs, 331
edema, 81
edger, 92
edible portion, 151
egg,
  candling, 236
  foam, 310
  forms of,
    dried, 237
    fortified, 237
    frozen, 237
    vacuum-packed, 237
  freshness, 236
  parts of,
    air cell, 236
    albumen, 236
    bloom, 236
    chalaza, 236
    yolk, 236
  poaching dish, 239
  simmering point, 238
  soft-peak stage, 243
  stiff-peak stage, 243
  uses of,
    garnish, 243
    ingredient, 242,
      binder, 242
      clarify, 242
      coating, 242
      emulsifier, 242
      leavening, 242
      thickener, 242
    main dish,
      baked, 240,
        shirred, 240
        Mornay, 240
      cooked in shell, 238,
        deviled, 238
        a la goldenrod, 238
        hard-cooked, 238
        soft-cooked, 238
      fried, 239
        basted, 239
        hard-fried, 239
        over-easy, 239
        sunny-side-up, 239
      omelets, 241
        fluffy, 241
        plain, 241
      poached, 239
        Benedict, 239
        Florentine, 239
        western-style poached, 239
      scrambled, 240-41
  wash, 304
electric can openers, see
  can openers
electric floor machine, 41
emotional fatigue, 16
employee involvement, 433
employee schedules, 466
Employee's Report on Tips, 426
empty-calorie foods, 65
emulsion,
  defined, 186
  types of,
    permanent, 186
    temporary, 186
English service, 374
enriched, 254
entree, 216
enzymes, 57, 63
equivalents, 152
essential amino acids, 57
essential fatty acids, 59
exhaust hood, 110
exit interview, 479
expediter, 348

F

Fair Labor Standards Act, 425, 434
falls
  prevention of, 16
family service, 375
fast food establishment, 3
fat, 155
fat-soluble, 60
fat thermometer, see
  thermometer
fatigue, 16
fatty acids, 59
FI-FO, see first in, first out
fill, 135
fill line, 170
fillets, 227
filling,
  defined, 175, 316
  types of,
    dry, 175
    moist, 175
finfish, 226
finish, 219
fire,
  extinguishers, 25
    kinds of,
      Class A, 24
      Class B, 24
      Class C, 24
  types of,
    electrical equipment, 25
    flammable liquids, 25
    ordinary combustibles, 25
fires and explosions,
  prevention of, 18
firing, 479
first in, first out, 139
fish, 226
fixed assets, 463
fixed costs, 464
fixed menus, 440
flaky crust, 334
flamed, 414
flan, 295
flat beater, 105
fleshing, 224
flies, 41
floating island, 295
floors,
  cleaning of, 39-40
  mopping of, 40-41
flour,
  types of,
    all-purpose, 278
    bread, 278
    self-rising, 278
    white, 278
flower nails, 322
fluoride, 64
fluorine, 64
flute, 335
fondant, see icings
food,
  buyers,
    code of ethics, 451
    effective purchasing, 452-56
    knowledge needed, 451
    purchasing principles, 452
  carriers, 94
  checker, 413
  chopper, 105
  contact surfaces, 36
  cost percentage, 442
  costs,
    defined, 441
    affected by, 483
  cutter,
    defined, 103
    safety using, 103
  groups, 65
  preparation,
    guidelines, 51
  processor, 65
  service,
    accidents,
      causes of, 15
    industry, 1
    jobs,
      advantages of, 4
      disadvantages of, 5
    organizational goals of, 431
    unit, 2
  showmanship, 414
  slicer,
    defined, 102
    safety using, 102
  warmers, 94
food-borne
  illness,
    chart of, 48
    common names of,
      staph, 47
      botulism, 47
      perfingens, 47
      poisoning, 47
      salmonellosis, 47
    defined, 46
  infection, 47
  intoxication, 47
forecast, 444
forequarter, 217
foresaddle, 217
Form W-2, see
  Wage and Tax Statement
formulas, 311
fortified, 60, 254
fountain specialities, 366
free steam, 269
free steamer, 269
freeze-dried, 188
freezer,
  defined, 118
  safe operation of, 140

freezer burn, 119
French buffet, 375
French fried, 109
French style service, 374
fresh meat, 218
fresh yeast, 279
fricasseeing, 222
fried, 225
front-of-the-house, 8
frosting, 316
frostings,
  boiled, 318
  creamed, 317
  decorator's, 317
  royal icing, 317
frozen meat, 218
fructose, 58
fruit,
  chart of kinds, 262
  compote, 293
  fritters, 293
  fillings, 336
  kinds of,
    berries, 262
    drupes, 262
    melons, 262
    pomes, 262
    tropical fruits, 262
  pies, 331
  turnovers, 293
  whips, 293
fryers, 223
frying pans, 93
full-line purveyors, 454

G

galactose, 58
garbage disposer, 122
garnish, 162
gauge, 110
gelatin creams, 294
gelatin whips, 294
gelatinize, 256
general diet, 79
glaze, see icings
glucose, 58
gluten, 254
glycerol, 59
goiter, 64
grading,
  defined, 130
  of cans, 264
grains, 253
grater, 89
gratuities, 347, see also tips
griddle, 109
grill, 109
grilled, 222
gross profit, 464
gueridon, 374

H

hard wheat, 278
hearty, 207
heated carts, see carts
heated pass-throughs, 120
heated pellets, 121
Heimlich maneuver, see
  abdominal thrust
hemoglobin, 63
herb, see seasonings
high-ratio shortening, 312
hindquarter, 217
hindsaddle, 217
horizontal promotions, 479
hormones, 57
horns, 331
hors d'oeuvres,
  defined, 197
  types of, 198-99
hot and cold carts, see carts
hot tea,
  making of, 168
human relations
  defined, 347
  development of, 347
hygiene, 35
hygrometer, 141

I

ice,
  cream pies, 295
  creams, 295
  making machines, 108
  milks, 295
iced tea,
  dispenser, 107
  making of, 168
ices, 295
icing,
  cooked,
    fondant, 318
    glaze, 318
  defined, 316
  nails, 322
  uncooked,
    flat, 317
    plain water, 317
    royal icing, see
      frosting
    simple, 317
imitation, 131
income tax, 435
incomplete protein, 57
indication-type scales, 134
individual toasters, 113
infrared lamps, 121
ingredients, 148
inorganic, 62
in-plant feeding units, 3
insect pests, see pests
institutional feeding units, 3
inventory, 142
iodine, 64
iodized salt, 64
iron, 63
issuing, 142

J

job,
  analysis, 481
  description, 476

K

ketosis, 57
kneaded, 283
knives, 88-89
kosher foods, 67

L

labor cost,
  defined, 441
  methods of comparisons,
    between operations, 480
    hourly sales and person-hours, 481
    person-hour, 480
    person-hours per 100 meals, 480
    profit and loss statements, 480
    sales per person-hour, 480
lactose, 58
ladles, 90
lamb, 216
layoffs, 479
leaven, 242
leavener, 278
legumes, 265
less tender cuts, 218
liabilities, 463
liason, 209
lipids, 59
liquid food extracts, 155
liquid measuring containers, 86
liquor laws, see state labor laws
listening skills, 346
loaf pans, 94
lukewarm, 150
lunch, 69

M

magnesium, 63
maltose, 58
management, 430
marbling, 217
marinade, 184
marinate, 183
marinating (meats), see meat
market study, 489
markup,
  standard percent of, 443
marzipan, 325
mealy crust, 334
measuring,
  equipment for,
    care of, 87
  guidelines, 86
  spoons, 86
meat,
  chopper, 105,
    safety using, 105-06
  defined, 216
  marinating, 220
  thermometer, 87
mental fatigue, 16

menus,
  planning of, 441
merchandising, 487
meringue, 338
microorganisms, 47
milk,
  types of,
    buttermilk, 169
    chocolate, 169
    chocolate drink, 169
    homogenized, 169
    skim, 169
    whole, 169
mincing, 266
minerals, 62
mixers,
  bench model, 104
  floor model, 104
  table model, 104
mobile refrigerators, 122
mobile unit catering, 412
modified diet, 68
moist heat, 155
molds, 49
molds (equipment), 93
mollusks, 227
monosaccharides, 58
monosodium glutamate, 50
mousse, 294
mucous membranes, 60
muffin
  method, 282
  pans, 94
muscle, 217

N
Napoleons, 331
net profit, 464
niacin, 62
night blindness, 60
nonessential amino acids, 57
nourishments, 82
nutrients, 56
nutrition labeling, 132

O
objective task method, 491
occupational expenses, 464
Occupational Safety and Health
  Act, see OSHA
off-premises catering, see catering
on-premises catering, see catering
one-crust pies, 335
opening duties, 362
organizational goals, 430
OSHA, 14
outdoor advertising, 490
ovens,
  frying, 222
  types of,
    brick-lined, 112
    carousel, 112
    convection, 112
    defined, 111
    general-purpose, 111
    hearth, 112
    impingement, 113
    infrared, 113
    microwave, 112
    pizza, 112
    reconstitution, 112
    regular, 111
    revolving, 112
    stack, 111
overhead, 441
overripe, 263
owner's equity, 463

P
pack, 135
packing list, 412
paddles, 90
pan fried, 225
panbroiled, 222
pantry pests, see pests
papain, 220
parfait, 295
passenger tray service, 412
pastas, 253
pastillage, 324
pastry,
  bags, 92
  blade, 105
  blender, 92
  cart, 94
  flour, 333
  shells, 331
  wheel, 92
patient, 78
peach Melba, 295
peeler, 89
perforated spoons, 90
perishable foods, 134
perpetual inventory, 142
personality, 344
personnel management, 475
pesticides, 43
pests,
  destroying of, 42-43
  types of,
    ants, 42
    birds, 41
    insects, 41
    pantry, 42
    rodent, 41
phosphorous, 63
physical fatigue, 16
physical hazards, 50
physical inventories, 142
pie crusts, 332
pie press, 336
piping, 322
pit, 262
pitchers, 95
pizza pans, 93
plate freezers, 140
plate service, 374
plates, 373
P.O., 455, see also
  purchase orders
policies, 431, see also
  policies and procedures
policies and procedures,
  development of, 431
  manual, 431
  planning of, 432-33
polysaccharide, 58
polyunsaturated (fat), 59
pork, 216
portion,
  control,
    defined, 161
    influences on menu, 482
  defined, 149
  packs, 366
  scale, 100
portioning, 161
potassium, 63
potato rounds, 271
poultry, 222
pounding, 221
pounds per square inch, see
  psi
pour batters, 277
prevailing wage rate, see
  state labor laws
primary expenses, 465
procedures, 431, see also
  policies and procedures
processed, 130
production,
  effective,
    benefits of 483-84
  line, 176
  schedule, 158
products, 488
profit, 441
profit and loss statement, 464
promotions, 491
proof, 285
proofing cabinet, 286
protein, 57
psi, 269
publicity, 491
public relations, 494
puddings, 294
puff paste, 332
pumice brick, 109
pumpernickel, see
  bread
punch, 170
purchase orders, 129, see
  also P.O.
purchase specifications, 453
purchasing agent, 450
purveyors, 455
pusher, 104

Q
quality,
  defined, 219
  grades, 219
quarters, 217
quick breads,
  characteristics of, 282
quick-service
  restaurants, 396
  units, 3
quitting, 479

R

- raft, 206
- ramekin, 240
- range top, 108
- real estate taxes, 467
- receiving,
  - clerk, 456
  - guidelines for, 135-37
  - records, 138
  - sheets, 138
  - stamp, 138
  - tickets, 138
- rechaud, 374
- rechaud lamp, 94
- reconstitute, 187
- records, 466
- red meat, 217
- refined, 254
- refrigerators,
  - safe operation of, 140
  - types of,
    - pass-through, 118
    - reach-in, 118
    - roll-in, 118
    - walk-in, 118
- regular diet, 79
- rehydrate, 188
- related opportunities, 11
- relishes, 201
- requisition, 142, 457
- resident, 78
- restaurant,
  - defined, 3
  - ownership of, 4
- retail cuts, 217
- ribbon sandwiches, 200
- riboflavin, 61
- rice,
  - types of,
    - brown, 254
    - coated, 254
    - converted, 254
    - enriched, 254
    - polished, 254
    - white, 254
    - wild, 254
- roasters, 223
- roasting,
  - defined, 111
  - pans, 93
  - rack, 93
- rodent pests, see pests
- rolled sandwich, 200
- roll-in process, 287
- rolling pin, 92
- rollwarmers, 120
- room service, 412
- rotary beaters, 91
- rotated menus, 440
- roughage, 58
- runners, 401
- Russian banquet service, 411
- Russian service, 374

S

- Salad,
  - case, 121
  - ingredients for,
    - enhancers, 190
    - fruits, 187
    - garnishes, 192
    - gelatin, 189
    - greens, 186
    - protein foods,
      - cheese, 189
      - eggs, 188
      - fish, 188
      - meat, 188
      - poultry, 188
    - toppings, 192,
      - croutons, 192
    - vegetables, 187
  - menu uses for,
    - accompaniment, 184
    - appetizer, 183
    - dessert, 184
    - entree, 184
    - salad bars, 185
  - parts of,
    - base, 185
    - body, 185
    - dressing,
      - defined, 185
      - types of,
        - cooked, 186
        - French, 186
        - mayonnaise, 186
        - oil and vinegar, 190
  - types of,
    - arranged, 183
    - combination,
      - defined, 182
      - types of,
        - cooked, 183
        - fruit, 182
        - green, 182
        - vegetable, 182
    - molded, 183
- sales tax, see tax
- salmonella contamination, 175
- salt shaker, 93
- samovar, 94
- sandwiches,
  - types of,
    - canapes, 173
    - club, 173
    - decker, 173
    - open-faced, 173
    - regular, 173
    - specialty, 174
    - tea, 173
- sanitarian, 33
- sanitary,
  - codes, 33
  - defined, 33
  - inspectors, 434
- sanitation, 33
- sanitizing solution, 37
- saturated (fat), 59
- saucepans, 93
- sauce,
  - types of,
    - cold, 211
    - foundation,
      - defined, 209
      - types of,
        - brown, 209
        - butter,
          - defined, 209
          - types of,
            - meuniere, 210
        - cream, 210
        - egg,
          - defined, 210
          - types of,
            - bearnaise, 210
            - hollandaise, 210
        - tomato,
          - defined, 209
          - types of,
            - marinara, 209
        - white, 209
    - gravies,
      - defined, 210
      - types of,
        - au jus, 210
        - pan gravy, 210
    - mayonnaise-based, 211
    - sweet,
      - egg,
        - defined, 212
        - types of,
          - custard, 212
          - foamy, 212
          - supreme, 212
      - fruit,
        - defined, 211
        - types of,
          - cooked, 212
          - puree, 212
      - hard sauces, 212
      - sugar syrups, 211
      - whipped cream, 211
    - sweet-sour, 211
    - tomato-based, 211
- saute,
  - defined, 222
  - pans, 93
- sauteed, 270
- scalded, 298
- scales, 99
- scalloped 270
- scheduling,
  - example, 478
  - factors influencing, 480
- scoops,
  - common sizes, 90
  - defined, 90
- scoring, 221
- scrap trays, 124
- seasoned, 109
- seasonings,
  - types of,
    - condiment, 157
    - extract, 156
    - herb, 155
    - salt,

  defined, 156
  types of,
    sea, 156
    seasoned, 156
    smoked, 156
    table, 156
  spices, 156
seated-service, 2
selective menu, 79
self sufficient back bar, 398
self-rising flour, see flour
self-service, 3
selling up, 354
service manager,
  traits of, 430
service stand, 363
service wagon, 94
serviceware, 366
shelf life, 141
shellfish, 64
sherbets, 295
shoestring, 271
shortcakes, 293
shortened, 309
shredding, 266
shucked, 227
side, 217
side stand, 363
sidework, 361
sieve, 93
sifter, 92
silencer, 376
simple syrup, 296
single crust pie, 330
single-action baking powder, 279
single-service towel, 35
sizzle platter, 95
skilled, 10
skillets, 93
skimmers, 90
slicing, 266
slotted spoons, 90
smorgasbord, 375
snows, 294
social security, 435
sodium,
  defined, 63
  retention, 81
soft custard, 294
soft doughs, 277
soft wheat, 278
soft-filled pies, 331
solid spoons, 90
soups,
  thickeners for,
    roux, 206
    starches,
      defined, 206
      types of,
        cornstarch, 206
        flour, 206
  types of,
    cold,
      defined, 208
      types of,
        Borscht, 208
        fruit, 208
        gazpacho, 208
        jellied consomme, 208
        vichyssoise, 208
    convenience, 208
    specialty soups, 207
    thick soups,
      defined, 206
      types of,
        cream, 207
        purees, 207
        vegetable, 207
    thin,
      defined, 206
      types of,
        bouillon, 206
        consomme, 206
Spanish cream, 294
spatulas,
  defined, 91
  types of,
    offset, 91
    plastic, 91
    rubber, 91
    turners, 91
speaking voice, 345-46
special payment terms, 454
specialty fillings, 337
specification cards, 453
splashback, 109
sponge-dough method, 284
sponges, 294
spray buffing, 41
spread, 174
spring-form pans, 94
spring-type scales, 100
staff,
  influences on, 8
staffing tables, 476
stale, 174
standard,
  defined, 132
  portions, 161
  recipe, 148
standardized,
  foods, 132
  recipes,
    guidelines for, 445
starch, 58, 256
state labor laws,
  defined, 435
  types of,
    child labor, 435
    liquor, 435
    prevailing wage rate, 435
    unemployment
      compensation, 436
    wage deductions, 435
    wage statements, 435
    workmen's compensation, 435
stationary dishwashing machines, 37
stations, 125
steaks (fish), 227
steam
  jacketed kettles,
    defined, 111
    safety using, 111
  tables, 120
steamers, 110
steaming, 269
steeped, 168
steward, 450
stewing,
  defined, 222
  hens, 223
stimuli, 62
stir-frying, 270
stock,
  defined, 155
  pots, 93
stocks,
  types of,
    brown, 206
    fish, 206
    poultry, 206
    white, 206
storage containers, 92
straight-dough method, 284
strainers, 93
style, 135
substitutions (recipe), 151
sucrose, 58
sugars, 58
suggestive selling, 353
sundae, 295
supply workers, 401
supervisor, 10
supplement, 82
supplementary feedings, 82
surrounding items, 443
sustagen, 82

T

table d'hote, 352
table service,
  defined, 382
  restaurants, 383
table tents, 378, 494
take-out service, 397
taking orders,
  abbreviations in, 385-87
tallow, 415
target market, 490
tarts, 331
task analysis, 481
tax,
  rate, 467
  sales, 421
  table, 421
tea,
  sandwiches, 200
  urn, 107
tender cuts, 218
therapeutic diet, 80
thermometer,
  defined, 87
  types of,
    confectionary, 87
    dial-type, 87
    fat, 87
    meat, 87
thermostats, 87
thiamine, 61
thick-steak, 271

three-compartment sink, 123
thyroxin, 64
time and temperature principle, 51
time cards, 466
tips, 424
tongs, 91
tools, 85
total,
  assets, 463
  cost, 456
toxic, 50
toxins, 47
trace minerals, 62
trade name, 132
transfer, 479
tray service, 412
trayline service, 373
trichina, 221
trichinosis, 221
trifle, 295
trivet, 93
trussing, 226
turners, see spatulas
turnover (customer), 441
turnovers, 331
two-crust pies, 331
two-tine forks, 91

U

uncooked icings, see icing
underripe, 263
unemployment compensation, see state labor laws
unit,
  defined, 455
  price, 455
United States Department of Agriculture, see USDA
unrefined, 253
unsaturated (fat), 59
unskilled, 9
urn, 107
USDA,
  grades used by, 131
utensils, 85
utility shears, 89

V

variable costs, 464
variety,
  defined, 131
  meats, 218
veal, 216
vegetable,
  boiling of, 268
  hopper, 105
  kinds of, 261
  peelers, 104
veloute, 209
vending machines, 404
vendor, 132
vents, 335
vertical promotions, 479
virus, 47
vitamin,
  defined, 60
  types of,
    A, 60
    B complex, 61
    C, 61
    D, 60
    E, 60
    K, 61
voluntary separation, 479

W

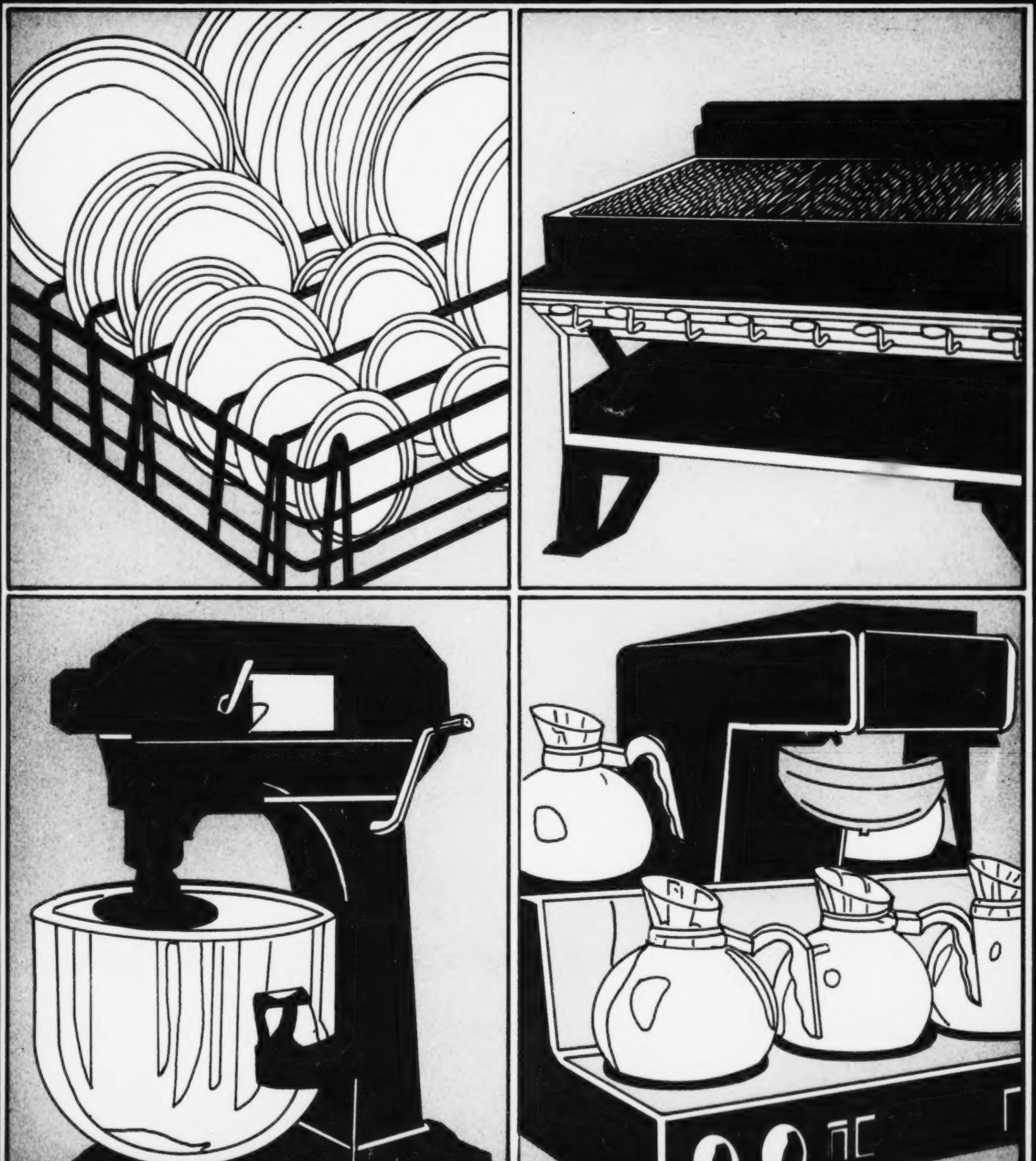
Wage and Tax Statement (Form W-2), 435
wage deductions, see state labor laws
wage statements, see state labor laws
warewashing, 123
warmers, 119
wash, 287, 335
waterless food warmer, 120
water-soluble, 61
waxy maize, 337
weather alerts,
  attention alert signal, 25
  tornado,
    warning, 26
    watch, 26
weeping, 189
whips, 105
whisks, 91
white flour, see flour
whole, 227
whole grain, 253
wholesale cuts, 217
wholesomeness, 130
wire whip, 91, 105
wooden spoons, 90
work,
  simplification, 158
  station, 361
workmen's compensation, see state labor laws
written specifications, 132

Y

yeast, 277
yeasts, 48
yield, 153

Food Production, Management, and Services

Student Activity Book



526

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Table of Contents

Page

Preface vii

Acknowledgments ix

1–The Food Service Industry 1
Activities 1-1 through 1-5

2–Food Service Careers 5
Activities 2-1 through 2-8

3–Safety 10
Activities 3-1 through 3-7

4–Emergency Procedures 18
Activities 4-1 through 4-9

5–Personnel, Equipment, and Facility Sanitation 24
Activities 5-1 through 5-6

6–Food Sanitation 31
Activities 6-1 through 6-5

7–Nutrition 37
Activities 7-1 through 7-10

8–Special Diets 46
Activities 8-1 through 8-7

9–Tools and Utensils 54
Activities 9-1 through 9-8

10–Food Preparation Equipment 65
Activities 10-1 through 10-9

11–Cold Storage, Serving, and Cleaning Equipment 74
Activities 11-1 through 11-6

12–Food and Supplies 80
Activities 12-1 through 12-7

13–Food Preparation Techniques 88
Activities 13-1 through 13-22

14–Beverages 112
Activities 14-1 through 14-5

15–Cold Sandwiches 117
Activities 15-1 through 15-6

530

16–Salads 123
Activities 16-1 through 16-7

17–Appetizers 131
Activities 17-1 through 17-6

18–Soups and Sauces 137
Activities 18-1 through 18-6

19–Meat, Poultry, and Fish 145
Activities 19-1 through 19-13

20–Eggs and Cheese 160
Activities 20-1 through 20-11

21–Cereals and Pastas 171
Activities 21-1 through 21-5

22–Vegetables and Fruits 178
Activities 22-1 through 22-9

23–Breads 186
Activities 23-1 through 23-6

24–Desserts and Cookies 194
Activities 24-1 through 24-8

25–Cakes and Icings 203
Activities 25-1 through 25-10

26–Pastry and Pies 217
Activities 26-1 through 26-11

27–Basic Service Skills 228
Activities 27-1 through 27-11

28–Sidework 240
Activities 28-1 through 28-4

29–Styles of Service 244
Activities 29-1 through 29-7

30–Table Service 252
Activities 30-1 through 30-13

31–Counter and Self-Service 265
Activities 31-1 through 31-7

32–Other Types of Food Service 274
Activities 32-1 through 32-7

33–Money Handling 284
Activities 33-1 through 33-13

Management Responsibilities 298
Activities 34-1 through 34-7

Cost Control 306
Activities 35-1 through 35-5

Buyers, Receivers, and The Storeroom 311
Activities 36-1 through 36-4

Finances and Recordkeeping 315
Activities 37-1 through 37-7

Personnel and Production Management 324
Activities 38-1 through 38-8

Merchandising and Public Relations 334
Activities 39-1 through 39-6

Preface

Food service is big business. The food service industry is the nation's largest retail employer. It is also one of the fastest growing industries in the United States. The National Institute of the Food Service Industry estimates that 250,000 employees are needed each year for new positions. Positions are available in restaurants, schools, institutions, and hospitals.

Career opportunities in food service are unlimited, ranging from beginning jobs open to the inexperienced, to the highest managerial positions requiring extensive experience and/or training.

Occupational Education Series

Food Production, Management, and Services is part of an occupational education series which focuses on a broad range of employment opportunities. Each title in the series addresses one career cluster. The instructional materials designed for each cluster include four components:

- Reference Book. Provides information needed by employees in the occupational area. Each chapter begins with Competencies to Develop and Objectives to Achieve. Within the text, italicized, bold-faced vocabulary terms are followed by a definition or explanation. Illustrations of equipment and procedures aid student learning. The content of each chapter is summarized in Points to Remember. The vocabulary terms are repeated in a list of Words to Know. Technical terms and concepts may also be located quickly by using the index. Questions for Review are provided for the student as a self-test.
- Curriculum Guide. Provides a variety of teacher information. Teaching strategies, teaching aids, laboratory management guides, and test questions, coordinated with the chapters in the reference book.
- Student Activity Book. Provides a variety of pencil-and-paper activities. Activities are correlated with chapters in the reference book.
- Student Aids. Provides information at third to fourth grade reading level and simplified pencil-and-paper activities.

This series of coordinated components is designed to meet a variety of instructional needs. The needs of both cooperative education and laboratory education students can be met. Both regular and special needs students can be accommodated.

Student Activity Book

The *Student Activity Book* was written to accompany the *Food, Production, Management, and Service* reference book. Its 39 chapters correspond to the 39 chapters in *Food Production, Management, and Service*. Each chapter in the *Student Activity Book* contains a variety of pencil-and-paper activities designed to reinforce the concepts presented in the reference book.

Each chapter begins with Compentencies to Develop and Objectives to Achieve, followed by a short paragraph describing the purpose of the chapter. The first activity is the same for each chapter: defining terms from the Words to Know list. The remainder of the chapter is completed with a variety of activities: crossword puzzles, mazes, word searches, and/or others.

Careful study of the activities in the *Student Activity Book* will yield a much greater understanding of the exciting and growing food service industry.

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The people listed below and on the following page made special contributions to the development of this publication.

Members of the Advisory Committee provided input regarding content and reviewed drafts of the materials. The advisory committee members included the following:

Don George
Texas Restaurant Association
Austin

Anita Hinojosa
City Home Economics Supervisor
Corpus Christi

Sandra Honeycutt
Home Economics Teacher
Evans Junior High
Lubbock

Barbara Ware
Specialist Occupational Education
Dallas ISD

David K. Hayes
Director and Associate
Professor, Restaurant
and Institutional Management
Texas Tech University
Lubbock

Julia Summers
Home Economics Dept.
Tarleton State University
Stephenville

Field reviewers included Vocational Home Economics Education teachers representing schools of varying sizes across the state who reviewed drafts of the materials and provided input regarding content.

Texas reviewers and the schools they represent included the following:

Imogene Behannon
Henderson High School

Odell Chism
Skyline Center

Barbara Friedson
Tom C. Clark High School

Phyllis J. Harbin
J. M. Hanks High School

Becky Heard
Pecos High School

Terri A. Jez
Santa Fe High School

Charlotte Lee
Moody High School

Jacqueline Mathews
Centerville High School

Sarita C. Ochoa
Lamar Middle School

Ann H. Pogue
South Grand Prarie High School

Louise M. Smith
Cooper High School

Deborah Stager
West Brook 9th

Jeanette Young
Levelland Junior High

Nancy S. Chafin
New Braunfels High School

Geralyn Cray
Davis High School

Cloteal L. Hall
Huntsville High School

Glenda Harris
Roosevelt High School

Diann Howard
Flour Bluff High School

Peggy Kelly
Lockhart High School

Joyce Leighman
Stephen F. Austin Junior High

Laura Gene Newburn
Bullard High School

Oralia Moran Perez
Hanna High School

Patsy S. Pundt
Borger High School

Lou Nell Spurrier
McKinney High School

Marsha Walker
Waco Regional School for
the Deaf

Texas Education Agency Area Home Economics Specialists who reviewed the materials included the following:

Virginia Chancellor
Area V, Denton

Sharon Glasscock
Area III, Houston

Bobbie Moore
Area X, Corpus Christi

Phoebe Denny
Area VII, Austin

Cindy Gruner
Area II, Big Spring

Sue Stanford
Area I, Plainview

Rex W. Castle, editor, and Rhonda Gilliam, graduate research assistant, edited this material.
Susan Owens produced the artwork.
David Harmon and Susan Owens designed the cover.
Michelle Kettmann and Eadie Bradford, graduate research assistants, assisted in development of this material.

1

Chapter One
The Food Service Industry

COMPETENCY TO DEVELOP

- Identify competencies needed to be an effective food service employee.

OBJECTIVES TO ACHIEVE

- Describe the food service industry.
- Describe the types of food service units.
- Point out advantages and disadvantages of food service work.

Food service is one of our nation's fastest growing industries. It serves nearly everyone at one time or another. Americans eat between 33 percent and 50 percent of their meals away from home. Therefore, the food service industry serves more than 750 million meals each day. The opportunities in food service are tremendous at both the worker and the managerial level. The industry offers chances to progress almost as fast as an employee is willing and able to assume the additional responsibility.

This chapter will increase your awareness of the food service industry, the various types of food service units, and the advantages and disadvantages of food service work.

ACTIVITY 1-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

buffet ____________________

catering unit ____________________

central kitchen ____________________

chain operation ____________________

commissary ____________________

corporation ____________________

franchise ____________________

food service industry ____________________

food service unit ____________________

in-plant feeding unit ____________________

institutional feeding unit ____________________

multi-unit operation ____________________

partnership ____________________

quick service ____________________

seated-service ____________________

self-service ____________________

sole proprietorship ____________________

take-out service ____________________

Additional terms

ACTIVITY 1-2

DIRECTIONS: Read each statement. If the statement is true, circle the letter T to the left of the statement. If the statement is false, circle the letter F to the left of the statement.

T F 1. Food service is the tenth largest industry in the United States.

T F 2. Americans eat one out of every three meals away from home.

T F 3. The food service industry is the single largest employer of young people in the nation.

T F 4. Two-thirds of all food service employees are male.

T F 5. Each year food service needs 250,000 new employees.

T F 6. Americans now spend 15 percent of their food dollars away from home.

T F 7. The food service industry employs about one million full-time workers and eight million part-time workers.

ACTIVITY 1-3

DIRECTIONS: Answer the following questions in the space provided.

1. In what five ways do food service units vary?

____

____

____

____

____

2. How do seated service and self-service differ?

____

____

____

3. Who is fed by each of the following types of food service units?
   - commercial establishment ______________________
   - central kitchen or commissary ______________________
   - institutional feeding unit ______________________
   - in-plant feeding unit ______________________

ACTIVITY 1-4

DIRECTIONS: Match each type of ownership to the appropriate definition. Place the letter of the ownership in the blank to the left of its definition. Use each letter only once.

DEFINITIONS

_____ 1. A business owned by stockholders doing business together as a single legal entity.

_____ 2. Several establishments with the same name, or different names but the same ownership, whether individual, partnership, or corporation.

_____ 3. A business that is owned and operated by a single person.

_____ 4. An agreement which assigns an individual, partnership, or corporation the right to use a name or formula in return for a fixed fee or a percentage of gross volume.

_____ 5. A business owned by two or more persons.

TYPES OF OWNERSHIP

A. Chain
B. Corporation
C. Franchise
D. Partnership
E. Sole proprietorship

ACTIVITY 1-5

DIRECTIONS: Answer the following questions in the space provided.

1. What are 7 advantages of food service work?

____
____
____
____
____
____
____

2. What are 4 disadvantages of food service work?

____
____
____
____

2

Chapter Two
Food Service Careers

COMPETENCIES TO DEVELOP

- Identify competencies needed to be an effective food service employee.
- Describe personal qualities which lead to job success in food management, production, and services.

OBJECTIVES TO ACHIEVE

- Describe the two main areas of a food service operation.
- Identify food production, management, and service career opportunities.
- Categorize food production, management, and service career opportunities as unskilled, semi-skilled, skilled, management, or related opportunities.
- Describe the experience, training, and/or education needed to qualify for specific food service careers.

The food service industry needs trained personnel and offers many possibilities for employment and advancement. An unskilled person who begins at the job entry level as busperson or kitchen helper can advance as quickly as the assigned tasks are learned. In many food service operations, an employee can reach the management level in one to two years.

This chapter focuses on career opportunities related to food production, management, and service. It will help you to identify your own interests, abilities, and training related to food service and determine specific food service jobs that you are interested in and qualified for.

ACTIVITY 2-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

control jobs ____________________

middle management ____________________

production jobs ____________________

related opportunities ____________________

semi-skilled ____________________

service jobs ____________________

skilled ____________________

supervision ____________________

supervision/management jobs ____________________

supervisor ____________________

support jobs ____________________

top management support jobs ____________________

unskilled ____________________

Additional terms

ACTIVITY 2-2

DIRECTIONS: Unscramble the following words to reveal the two main areas of a food service operation. Write each word on the broken lines. After you discover each answer, define the word on the solid lines.

1. nftor-fo-eth-uhseo ___ ___ ___ ___ ___ - ___ ___ - ___ ___ ___ - ___ ___ ___ ___ ___

2. ckab-fo-teh-soheu ___ ___ ___ ___ - ___ ___ - ___ ___ ___ - ___ ___ ___ ___ ___

ACTIVITY 2-3

DIRECTIONS: Determine whether each type of job listed below is a front-of-the-house job or a back-of-the house job by writing FRONT or BACK in the blank to the right of each job.

1. Production jobs ________________
2. Management jobs ________________
3. Control jobs ________________
4. Support jobs ________________
5. Service jobs ________________

ACTIVITY 2-4

DIRECTIONS: Place the letter of each type of job in the blank to the left of the example that best illustrates it. Use each letter only once.

EXAMPLES

_____ 1. Vegetable preparers, meat cutters, pantry workers, cooks, bakers, and chefs.

_____ 2. Set-up personnel, dining room attendants, bartenders, waiters/waitresses, cocktail servers, dining room captains, host/hostess, and dining room manager.

_____ 3. Food runners, receiving room attendants, storeroom attendants, storeroom supervisor, food checker, cashier, purchasing steward.

_____ 4. Dishwasher, pot washer, silver polisher, porter, sanitation supervisor, and steward.

_____ 5. Matre d' hotel, banquet managers, food and beverage manager, food and beverage controller, wine steward, and executive chef.

TYPES OF JOBS

A. Control jobs
B. Management jobs
C. Production jobs
D. Service jobs
E. Support jobs

ACTIVITY 2-5

DIRECTIONS: In the blanks provided, describe the experience, training, and/or education needed for the following food service jobs.

1. Unskilled ____
2. Semi-skilled jobs ____________________________________
3. Skilled jobs ____
4. Supervision/management jobs
   - Supervisor ____________________________________
   - Middle-management ______________________________
   - Top-management ______________________________

ACTIVITY 2-6 **DIRECTIONS**: Listed are a variety of food service positions available for different skill levels. Match each position to the appropriate job level by placing the correct letter of each job in the blanks to the left of the job category.

JOB CATEGORY

_____ 1. management job

_____ 2. back of the house - unskilled job

_____ 3. front of the house - skilled job

_____ 4. support job

_____ 5. production job

_____ 6. back of the house - semiskilled job that is also a production job

_____ 7. control job

_____ 8. front of the house - semiskilled job that is also a control job

_____ 9. service job

_____10. back of the house - semiskilled job

_____11. back of the house - skilled, job which is also a production job

_____12. supervisory/management job which is also a service job

_____13. back of the house supervisory job which is also a support job

FOOD SERVICE JOBS

A. cashier
B. chef
C. coffee maker
D. executive chef
E. food checker
F. head waiter
G. host
H. meat cutter
I. pantry worker
J. porter
K. sandwich maker
L. set up person
M. steward

ACTIVITY 2-7 **DIRECTIONS**: In the chart below, list as many back-of-the-house and front-of-the-house jobs for each skill as you can.

SKILL LEVEL	BACK OF THE HOUSE	FRONT OF THE HOUSE
Unskilled	____________________ ____________________	____________________ ____________________
Semi-skilled	____________________ ____________________	____________________ ____________________
Skilled	____________________ ____________________	____________________ ____________________

ACTIVITY 2-8

DIRECTIONS: Check the characteristics you have observed in a person that holds a managerial position. List additional characteristics you have observed if they are not listed below.

_____ 1. Accepts and delegates responsibility

_____ 2. Works well with people from all cultures and socioeconomic levels

_____ 3. Dependable

_____ 4. Trustworthy

_____ 5. Self-motivated

_____ 6. Appreciates good food

_____ 7. Maintains high standards of neatness and cleanliness

_____ 8. Healthy

_____ 9. Reasonably intelligent (common sense, skillful in math, and resourceful)

_____10. Enthusiastic

_____11. Ambitious

_____12. Management-oriented (good organizer, makes decisions, adapts to change, impartial and objective, works well under pressure, and accepts own mistakes)

_____13. Loyal

_____14. Observes company policies

_____15. Willing to work long hours

_____16. ______________________________

_____17. ______________________________

_____18. ______________________________

Select 2 or 3 characteristics that you feel are most effective in a manager. Tell why. Do you possess the characteristics to be a manager? Justify your answer.

____

____

____

____

____

____

3

Chapter Three
Safety

COMPETENCIES TO DEVELOP

- Maintain high safety standards in food preparation, service, and cleanup tasks.
- Complete accident reports and records.

OBJECTIVES TO ACHIEVE

- Summarize safety obligations of food service management and food service employees.
- Describe reports and records to complete following an accident.
- Identify major causes of food service accidents.
- Outline procedures for preventing accidents in the food service facility.

The National Safety Council estimates that 90% of all accidents occurring in commercial food service facilities are avoidable. Accidents are expensive to employers as well as to employees in terms of time, money, and physical health. Accidents result from unsafe acts or unsafe conditions. An injury results from one or a combination of these two factors. Injuries due to unsafe conditions can be eliminated. Unsafe acts involve human beings and therefore can never be eliminated entirely. Unsafe acts which cause accidents are often a result of failure to follow instructions, to use equipment properly, to control one's temper, or to rest adequately.

This chapter will help you recognize causes of food service accidents and determine ways in which you can avoid them.

ACTIVITY 3-1 **DIRECTIONS**: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

accident-prone ____________________

Occupational Safety and Health Act (OSHA) ____________________

fatigue ____________________

Additional terms

____

____

ACTIVITY 3-2 **DIRECTIONS**: Answer the following questions in the spaces provided.

1. List five safety responsibilities of food service management.

____

____

____

____

____

2. List four safety responsibilities of food service employees.

____

____

____

____

3. What is the purpose of the federal Occupational Safety and Health Act of 1970?

____

____

4. What information should be included in a food service accident record?

____

____

5. Who is responsible for completing the food service accident report or record?

____

6. Why are accident records and reports necessary?

____

____

____

ACTIVITY 3-3 **DIRECTIONS**: Read the case situation below. Then complete the sample accident report form according to the information in the case study.

ACCIDENT CASE SITUATION

Josie Brown, S.S. #425-06-3111, a cook at The Lobster Trap restaurant was preparing salads on Tuesday morning, June 5, 1985. As the salad ingredients were being obtained from the walk-in refrigerator, Miss Brown slipped and fell on some grease outside the door. Sue Wright and Jim Blackburn rushed over to see if Miss Brown was injured and to help her up. Miss Brown said she was not hurt, just embarrassed.

SAMPLE ACCIDENT REPORT FORM
THE LOBSTER TRAP

		100 - 1100
Name	Social Security #	Phone Number
Main Street	Anytown, ST	0011
Street Address	City, State	Zip Code

Describe the injury, if any:

Describe the Accident (Where, Date and Time, Who was present, Cause):

The Following to be Completed by Attending Physician:

Patient's Name	Date of Visit	Name of Physician

Was emergency treatment required? ___ Yes ___ No ___ Where performed

Was hospitalization required? ___ Yes ___ No ___ Name of hospital

Will time off work be required? ___ Yes ___ No ___ Length of time

ACTIVITY 3-4

DIRECTIONS: Listed below the word search are several causes of accidents that may occur in food service operations. Find seven accidents that may occur as a result of the causes listed below. Words in the puzzle may be spelled horizontally, vertically, or diagonally. Circle the words as you find them.

WORD SEARCH—ACCIDENTS

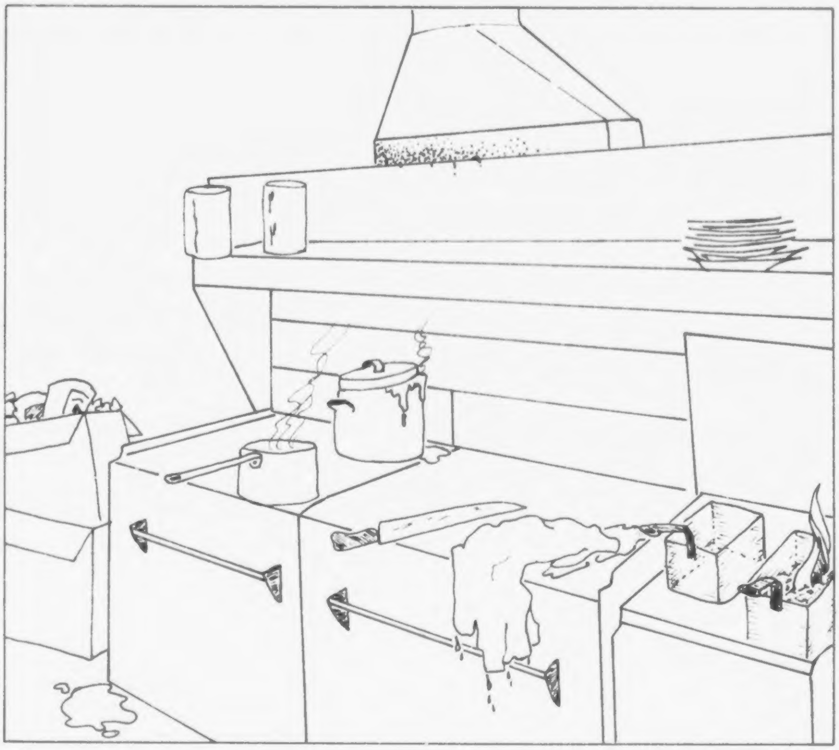
F J L K S L X T C N D Y D
B T B P H F I U E Q Z W B
E D X S O A O M I M J S U
T X T J C L S H B U E I R
A U P I K L S S V S W F N
C Z H L S S N J I O I N S
N P B S O I B U C L D Q X
Q L C Q A S R Q W E C F H
Q W C R U B I R C G P A Y
L J T X R W F C Y B E K E
R S V S L D I C N F C H O
R N I A Y C U S Q S L M R

CAUSES OF ACCIDENTS

__________ Broken glass or dishes
__________ Colliding with objects
__________ Flammable materials near open flame
__________ Grease splatters
__________ Improper handling of electrical cords
__________ Improper use of knives
__________ Lifting heavy objects
__________ Loose fitting garments
__________ Overloading trays
__________ Poor lighting
__________ Running or horseplay
__________ Slippery or wet floor

ACTIVITY 3-5

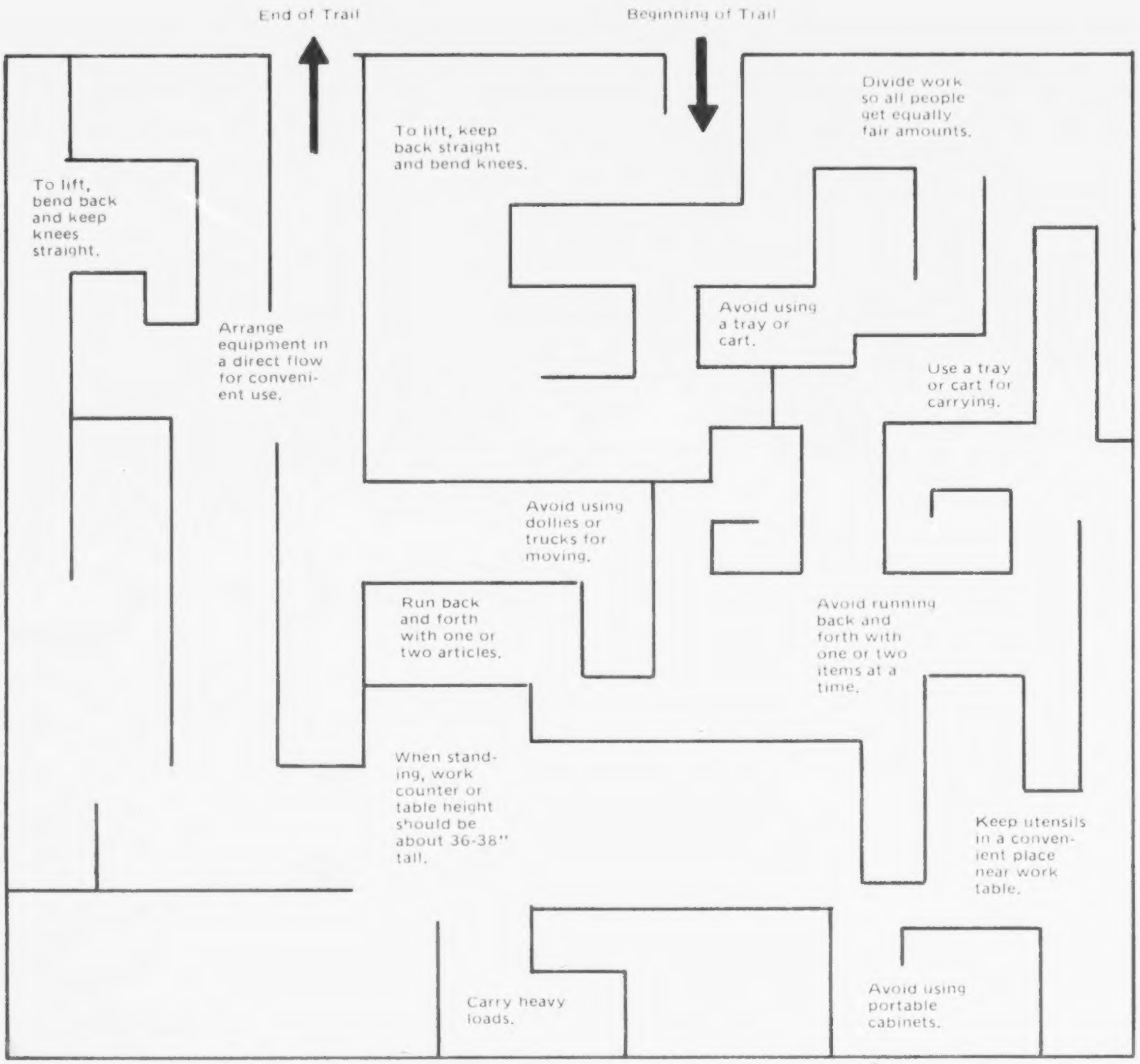
DIRECTIONS: To identify safety hazards and potential accidents in food service, circle all of the safety hazards that you can find in the illustration below. Below the illustration, describe the potential hazard of each item you circled.



ACTIVITY 3-6

DIRECTIONS: Physical, mental, and emotional fatigue can result in accidents on the job. To reduce fatigue, follow the trail through the maze below. If you take the best route for work simplification and fatigue reduction, you will reach the end of the trail. Good luck! (Use a pen or pencil to trace your path.)

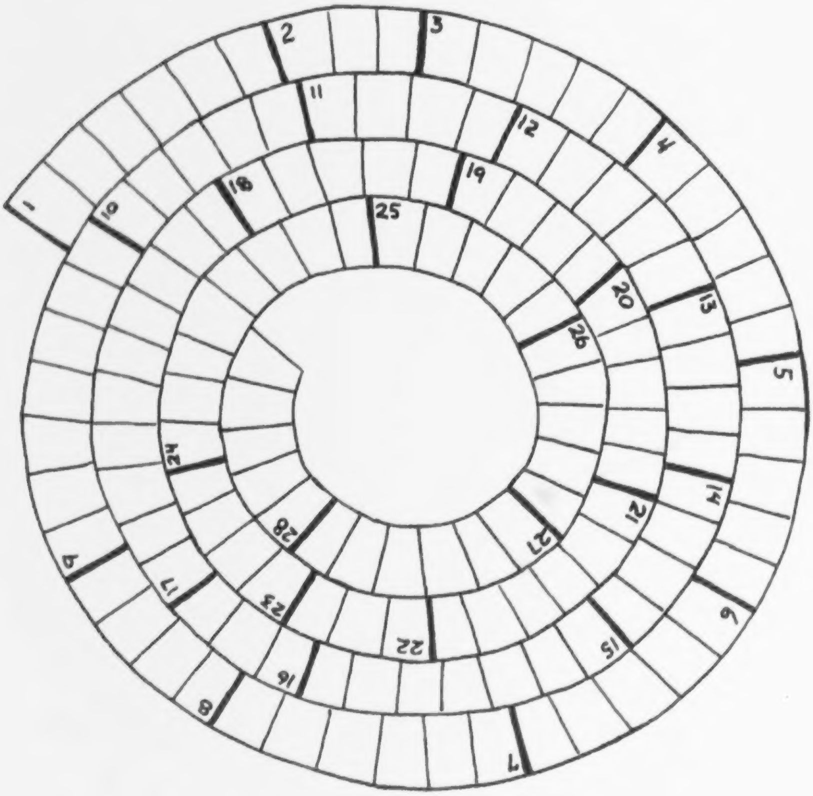
FATIGUE REDUCTION MAZE


End of Trail
Beginning of Trail
Divide work so all people get equally fair amounts.
To lift, keep back straight and bend knees.
To lift, bend back and keep knees straight.
Arrange equipment in a direct flow for conveni-ent use.
Avoid using a tray or cart.
Use a tray or cart for carrying.
Avoid using dollies or trucks for moving.
Run back and forth with one or two articles.
Avoid running back and forth with one or two items at a time.
When stand-ing, work counter or table height should be about 36-38" tall.
Keep utensils in a conven-ient place near work table.
Carry heavy loads.
Avoid using portable cabinets.

List some additional ways to reduce fatigue.

ACTIVITY 3-7

DIRECTIONS: Complete each of the following statements by placing the missing word by the corresponding number in the spiral puzzle below (The answer to number 1 would be written at 1 on the spiral).


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

To prevent falls:

1. Wipe up ________________ immediately.
2. Walk, do not ________________.
3. Use a stepladder, never a ________________, for reaching objects on high shelves.
4. Keep work areas and traffic ________________ clear.
5. Wear low-heeled, comfortable work ________________ with rubber soles.

To prevent cuts:

6. Use the correct ________________ for the job.
7. Pick up knives by the ________________.
8. Cut ________________ from your body and fellow workers.
9. Use a ________________ board when possible.
10. Keep knives ________________.
11. Never leave knives in a ________________ of water where they cannot be seen.
12. Do not pick up broken pieces of glass with your ________________.
13. Discard open cans and their ________________ promptly.

To prevent burns and shocks:

14. Use thick, dry hot ________________ or mitts when handling hot pans and dishes.
15. Turn pan ________________ away from the front of the range to prevent tipping.
16. Never handle electrical equipment with ________________ hands.
17. Never pull on an ________________ cord when disconnecting from wall outlet.
18. Lift utensil covers away from you to let the ________________ escape before removing.
19. Always unplug electrical equipment from the ________________ outlet first, then disconnect the cord from the equipment.

To prevent fires and explosions:

20. Never use ________________ to put out a grease fire.
21. Keep range, ovens, and hoods free from ________________.
22. Strike the match before turning on the ________________ when lighting the oven.
23. Cover fat spilled on the floor with ________________, then clean up.

To prevent strains and bruises:

24. Do not ________________ trays and carts.
25. Store ________________ items on lower shelves.
26. Watch where you are ________________.
27. Balance ________________ on trays carefully.
28. Get help to lift and ________________ heavy objects.

4

Chapter Four
Emergency Procedures

COMPETENCY TO DEVELOP

- Follow appropriate procedures in emergency situations.

OBJECTIVES TO ACHIEVE

- Describe appropriate procedures to follow in case of fire.
- Classify fires according to type.
- Identify types of fire extinguishers and their uses.
- Summarize procedures to follow for various weather related emergencies.
- Outline procedures to follow in medical emergencies.
- Classify burns according to severity.

Every food service establishment's safety instructions should include what to do in case of emergency. The food service manager should identify the hazards most likely to occur in the food service facility. Personal injury from falls, strains, cuts, burns, and choking were discussed in the chapter on safety precautions. Fire and severe weather are also hazards to food service establishments. Emergency procedures for each hazard should be developed. Employees should be thoroughly instructed in each procedure.

This chapter will increase your awareness of emergency procedures for each hazard.

ACTIVITY 4-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

attention alert signal ____________________

carbon dioxide (CO-2) ____________________

dry chemical ____________________

foam ____________________

pressurized water ____________________

vaporizing liquid ____________________

Additional terms

____

____

____

ACTIVITY 4-2

DIRECTIONS: Assume that you are a food service employee in The Burger Barn, and you have just seen a fire start in the cooking area. Outline the steps or procedures you would take in this situation.

____

____

____

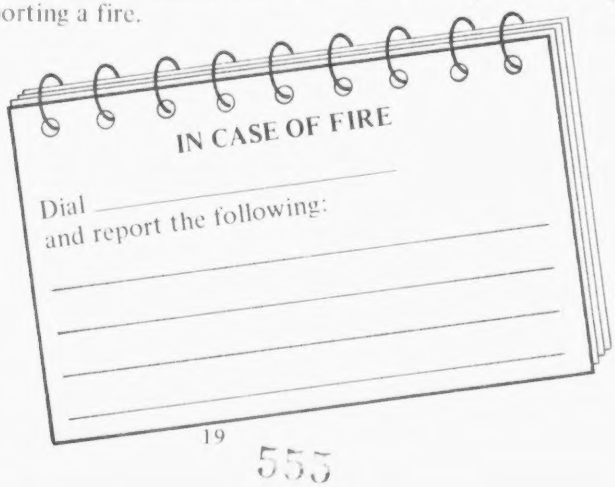
____

____

____

ACTIVITY 4-3

DIRECTIONS: Fill in the chart below by listing your local fire department's phone number and the information you should give when reporting a fire.



IN CASE OF FIRE

Dial ____________________

and report the following:

____

____

____

____

ACTIVITY 4-4

DIRECTIONS: In the blanks provided write the letter or word that best completes the sentence.

1. A fire consisting of wood, paper, or rubbish would be classified as a

   Class __________________ fire.

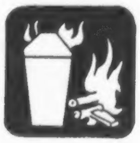
2. A fire consisting of live electrical equipment would be classified as a

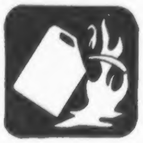
   Class __________________ fire.

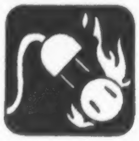
3. A fire consisting of gas, grease, or other liquids would be classified as a

   Class __________________ fire.

4. A fire must have __________, __________, and __________ to burn.







ACTIVITY 4-5

DIRECTIONS: In the blank to the left of each fire extinguisher, place the letter corresponding to its use. One letter will be used twice.

TYPES OF FIRE EXTINGUISHERS

_____ 1. Dry Chemical

_____ 2. Carbon dioxide

_____ 3. Pressurized Water

_____ 4. Foam

_____ 5. Soda-Acid

_____ 6. Gas Cartridge

_____ 7. Vaporizing Liquid

USES

A. Burning liquids or electrical fires where a smothering action is needed.

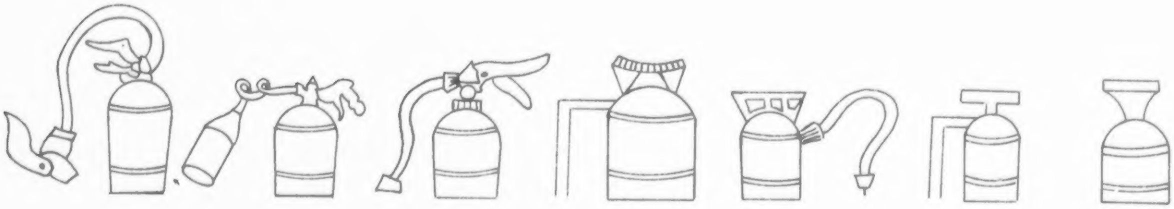
B. Grease, oil, gasoline, and paint fires.

C. Live, electrical fires.

D. Live electric fires; wood, paper, excelsior, and other ordinary combustible materials.

E. Paper, wood, excelsior, cloth, and general combustible fires requiring cooling and quenching.

F. Wood, paper, textile fires; gasoline, oil anesthetic, or organic solvent fires.



ACTIVITY 4-6

DIRECTIONS: Answer the following items in the spaces provided.

1. List five weather-related hazards that could affect food service establishments.

2. What are some common sources of information that food service managers can rely upon for weather reports?

3. What is an attention alert signal and why is it important to food service workers?

4. What is the difference between a tornado watch and a tornado warning?

5. Give three examples of safe places for shelter during a tornado.

6. Why is it important for food service workers to be aware of these places for shelter?

7. Describe three ways panic can be avoided in case of power failure.

ACTIVITY 4-7

DIRECTIONS: Answer the following questions in the spaces provided.

1. What are some common medical emergencies that could affect food service establishments?

2. How can a food service worker determine that a person is the victim of choking, rather than a heart attack?

3. Name and describe the two procedures used to dislodge a foreign body which is causing a person to choke?

ACTIVITY 4-8

DIRECTIONS: Read the case studies below and answer the questions following.

Case Situation #1

Harry, an employee of Katie's Cafeteria, cut himself with a knife while washing dishes in the sink. His wound seems to be minor. How should he treat it?

Case Situation #2

Emile, an employee of Cindy's Eatery, fell off of a chair while reaching for the flour on the top shelf. He bruised his chin and blackened his eye with the fall. How should he treat his injuries?

Case Situation #3

Stella, an employee of Stanley's Steak House, cut her hand severely while carving meat. Her hand is bleeding very badly. What should she do?

ACTIVITY 4-9

DIRECTIONS: In the chart below, write an accurate description of and the treatment needed for each type of burn.

TYPES OF BURNS

First-degree

Description: ______________________________

Treatment: ______________________________

Second-degree

Description: ______________________________

Treatment: ______________________________

Third-degree

Description: ______________________________

Treatment: ______________________________

5

Chapter Five
Personnel, Equipment, and Facility Sanitation

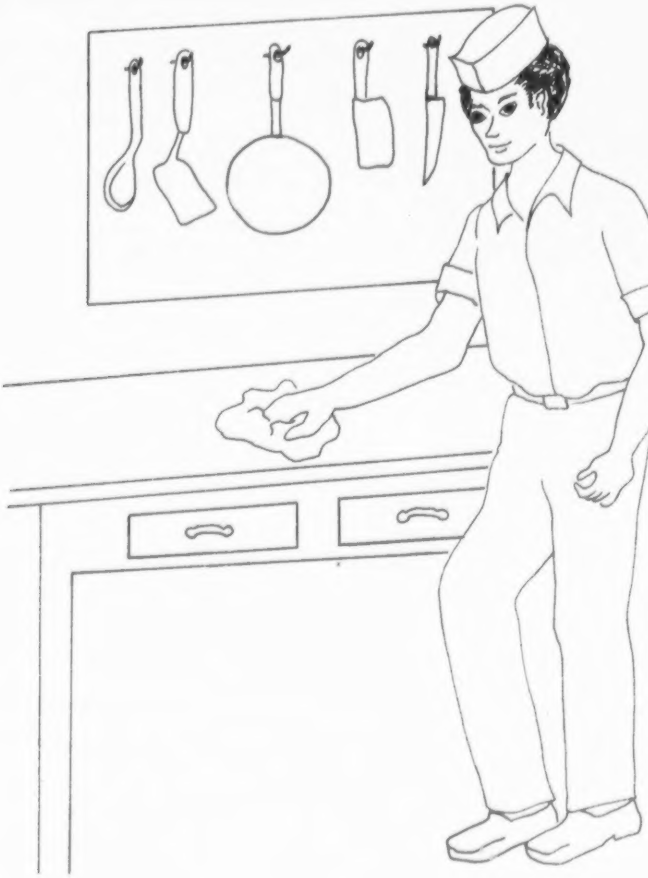
COMPETENCIES TO DEVELOP

- Follow federal, state, and local sanitation codes for food service establishments.
- Maintain acceptable standards in personal grooming and hygiene.
- Perform sanitation duties according to the cleaning schedule provided.
- Use sanitary procedures when washing, sanitizing, and drying pots, pans, and other utensils by hand.
- Use sanitary procedures when washing glassware, tableware, and flatware in the dishwashing machine.
- Inspect, sort, and store clean glassware, tableware, flatware, and utensils.
- Report signs of pests in the food service establishment.

OBJECTIVES TO ACHIEVE

- Summarize federal, state, and local sanitation codes for food service establishments.
- Demonstrate personal sanitation acceptable for food service employees.
- Explain procedures for washing, sanitizing, and drying pots, pans, and other utensils by hand.
- Outline procedures for washing glassware, tableware, and flatware in the dishwashing machine.
- Describe procedures for inspecting, sorting, and storing clean glassware, tableware, flatware, and utensils.
- Describe sanitation requirements for food service equipment.
- Cite procedures for pest control in the establishment.

"Sanitation is a way of life." This statement by the National Sanitation Foundation means that sanitation is the quality of living that is expressed in the clean home, the clean farm, the clean business and industry, the clean neighborhood, and the clean community. Sanitary conditions are of utmost importance to any establishment dealing with food preparation and service. Customers and patients expect cleanliness and sanitation. All food service personnel of the food service establishment must work to ensure the satisfaction of customers and patients. The management provides facilities, equipment, and materials for developing a program of cleaning and sanitizing and must see that the program is followed. Employees must carry out the program.



ACTIVITY 5-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

aseptic ______________________________

bird pests ______________________________

chemical sanitizer ______________________________

insect pests ______________________________

pantry pests ______________________________

pesticides ______________________________

rodent pests ______________________________

Additional terms

____

____

____

____

ACTIVITY 5-2

DIRECTIONS: Circle the letter T to the left of each statement if the statement is true. Circle the letter F if the statement is false.

T F 1. Cleaning stationary equipment is *not* as important as cleaning utensils.

T F 2. Removable parts of stationary equipment should be disassembled and washed by hand.

T F 3. It is *not* necessary to unplug electrical equipment before cleaning.

T F 4. There is no need to separate wiping cloths used for food-contact surfaces of equipment from other wiping cloths.

T F 5. Food-contact surfaces of equipment need only to be washed and rinsed with soap and water.

T F 6. Cleanliness is necessary to preserve the appearance of furniture.

T F 7. To reduce breakage, dishes should be placed in a separate pan from silverware when being removed from a table.

T F 8. Table tops and counters should be cleaned with a sanitizing solution once a week.

T F 9. Windows, shelves, and glass counters should be kept clean to prevent the growth of bacteria.

562

ACTIVITY 5-3

DIRECTIONS: Check (✓) the following practices that you employ at your work station. Put an (X) by the sanitation practices that do not apply to your work station or your duties. Place a star (*) by the practices you need to work on or be cautious of.

CHECKLIST
Sanitation Practices in Food Handling

____ 1. I always wash my hands before handling food, after using the toilet, after using handkerchiefs or tissues, after handling garbage, cleaning agents, or poisons, and after handling dirty dishes.

____ 2. I never lick my fingers or thumbs when preparing and serving foods.

____ 3. I avoid putting my hands on my face, nose, or hair.

____ 4. I keep my fingernails clipped and clean.

____ 5. I always wear a hair net or cap when working in the food service area to keep hair away from food.

____ 6. I avoid putting my fingers in my hair.

____ 7. I avoid wearing soiled aprons and outer garments.

____ 8. I do not chew gum, smoke, or use other tobacco products near the food preparation and service area.

____ 9. I do not cough or sneeze near food or dishes.

____10. I use disposable tissues and throw them away immediately.

____11. I treat and report sores, rashes, boils, or other skin eruptions.

____12. I touch only the handles of forks, knives, and spoons used in preparing food, serving patient trays, or setting tables for dining room service.

____13. I do not touch the rims of glassware and cups.

____14. I do not put fingers inside mixing bowls, plates, and saucers.

____15. I use tongs for placing ice in glasses or pitchers.

____16. I use tongs or plastic gloves for serving pastry, rolls, or doughnuts.

____17. I always keep utensils used for serving salads and sandwich fillers in the original containers, and never exchange with utensils used for serving other foods.

____18. I keep ice cream dippers in cold running water when not in use.

____19. I report suspected food-borne illnesses to my supervisor or manager who can contact the local health department.

ACTIVITY 5-4 **DIRECTIONS**: Answer the following questions in the spaces provided.

1. Describe the most common method of heat sanitizing.

2. Summarize the six steps involved in washing, sanitizing, and drying utensils by hand.

3. Name and describe two types of dishwashing machines.

4. Describe the correct procedure for loading each of the following in a dishwashing machine.
   - glassware
   - tableware
   - flatware

5. What are some sorting and storing procedures that can be practiced to insure that utensils are not contaminated before use?

ACTIVITY 5-5

DIRECTIONS: There are 13 insect, rodent, and bird pests hiding in the word search below. They are a threat to your food service establishment and must be exterminated. See if you can exterminate them by finding them in the puzzle and circling them. They are cleverly hiding in diagonal, horizontal, vertical, and backward positions. Good luck!

WORD SEARCH - PESTS

X M S E V K M Y Y C F U G I U R T X K Y X K
M I I X I H A V L C F S H N F X B O J D D V
L K U S Y T U A F B I O G P L G K U A O K C
O C O P K K H A I L M I P R S R P H F W Y T
P F G O P C I R V T C E L Z F Q I H T Z X F
I W Y Y N G S E A Q K X M L T R P I N J X I
G V H V O R R E N T M V W L U A Q K O H T R
E U I S O F N O L P S Q R S Y X S H S Z M E
O M C O I M X B W T R V W G D O Y P R G S B
N J Z S N J I Q X Z E C J I E H M P L V F R
S J H C W E J Q U S R E T N E O A E B C W A
X P B C E Z F Y T R V F B W E U S M I V K T
G D H O H R F G A Q L M B N I A T S M J L S
T T X C Y T E P F I R T W O A C I G I A B U
Q I P K L V S A F S N B C L S R Y U E R V T
B S I R R X W S L O X W Y T C K B E R C E Z
E N J O S E K X H M E S N O M X Z I P M Z F
D Z Q A R Z I P N E I A C I L G W D N T X N
S N D C L E Z D V X J T C B O L R B I Z A F
L A F H U M F I Q M W E E S G N I L R A T S
M A J E S W L M C F M S H S C V Y J H O G F
C Z H S G S U E R M F Y P E D M M U W G X Q

BONUS: After completing the word search, list and explain at least four measures of pest control.

ACTIVITY 5-6

DIRECTIONS: Match the **TYPE** of the floor to the suggestions for **CARE** of floors. Place the letter of the type of floor in the blank to the left of each care method. Letters may be used more than once.

CARE

____ 1. Remove spots with a cloth dampened with a liquid wax.

____ 2. Use a sealer in heavy traffic areas.

____ 3. Wash with ordinary cleaning solution.

____ 4. Use steel wool and a cleaning solution to remove heavy soil.

____ 5. Use ammonia to remove soil.

____ 6. Shampoo as needed.

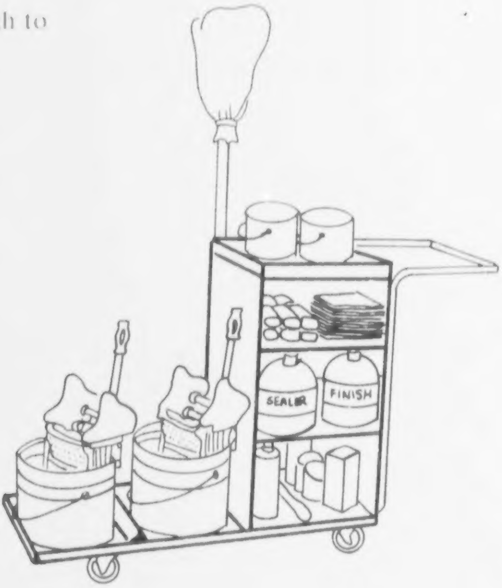
____ 7. Use abrasive cleaner occasionally to remove soil and stain.

____ 8. Leave detergent on floor long enough to loosen soil.

____ 9. Never use an oil mop for dusting.

TYPES

A. Carpet
B. Ceramic tile
C. Concrete
D. Hardwood
E. Rubber tile
F. Terrazzo
G. Vinyl tile



6

Chapter Six
Food Sanitation

COMPETENCIES TO DEVELOP

- Use sanitary food handling, preparation and storage techniques.

OBJECTIVES TO ACHIEVE

- Explain biological, chemical, and physical hazards to food.
- Describe food-borne illnesses, their causes, and means of transmission.
- Summarize sanitary procedures for food handling and storage.
- Explain the time-and-temperature principle.
- Describe correct procedure for handling leftover foods.

Estimates indicate that at least 1 million persons in the United States suffer from food-borne illnesses each year. Most of these illnesses result from the failure of persons responsible for the preparation and serving of food to use safe and sanitary food-handling methods.

Health-service regulations and inspections make sanitary food handling practices imperative in the successful commercial food facility. In addition, the food-service manager is liable if a law suit is brought. Because actual standards of sanitation depend on the observance of sanitary practices by employees, management will keep a close watch to assure that the highest standards of cleanliness and sanitation are observed. Employees who voluntarily and consistently observe sanitary practices are more likely to succeed in their jobs than those who do not.

ACTIVITY 6-1 **DIRECTIONS**: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

bacteria

biological hazards

food-borne illness

microorganisms

toxins

viruses

Additional terms

ACTIVITY 6-2 **DIRECTIONS**: Answer the following questions in the space provided.

1. List and explain three guidelines for sanitation during food preparation.

2. Describe the time-and-temperature principle.

3. List three guidelines for managing leftover foods.

ACTIVITY 6-3

DIRECTIONS: The *pre-test* that follows is designed to test your understanding of the practices of good food service sanitation. It is geared to your practical, day-to-day activities as a food service worker. It does not require that you understand the pathogens or the toxins that cause food-borne illnesses. Read each statement and,if the statment is True, circle the T to the left of the statement; if the statment is False, circle the F to the left of the statement.

T F 1. Preprocessing of foods eliminates the risk of food poisoning.

T F 2. Any kind of food can serve as a vehicle for illness-causing bacteria.

T F 3. Most raw food no matter how reliable its source, is contaminated to a certain extent before it arrives at the food service establishment.

T F 4. Proper cleaning and cooking will destroy most contaminants.

T F 5. Disease-causing microorganisms require a warm, moist environment to prosper. For this reason, refrigerated foods can be considered safe.

T F 6. The dangerous temperature zone is between 45°F and 140°F.

T F 7. Contamination and spoilage are the same thing.

T F 8. Most bacteria cannot survive in a high-salt or high-acid food.

T F 9. Bacteria do not live at all in frozen foods.

T F 10. Highly acidic foods, such as vinegar and citrus fruits, are virtually never vehicles for disease-causing bacteria.

T F 11. As long as food does not have a spoiled taste or odor, it can be assumed to be safe.

T F 12. Foods should be cooled at room temperature before they are refrigerated.

T F 13. Knives and cutting boards can be used for both raw and cooked meats as long as they are wiped off in between use.

T F 14. The contents of a swollen can should be tasted to test for wholesomeness and safety.

T F 15. Soups, stews and sauces should be cooled in large buckets or stockpots.

T F 16. Wherever possible, frozen-food products should be stored in their original cartons.

T F 17. A cook with a sore on his or her hand should cover it with an ordinary bandage before he or she handles food.

T F 18. The food-contact surfaces of cutlery and dishware should never be touched.

T F 19. Crumbs left over from chicken or seafood breading can be safely saved for reuse later.

T F 20. If a hot food is kept "piping hot" under a heat lamp, one can be confident that it is safe.

T F 21. Cooked, perishable leftovers should be chilled to a safe temperature (45°F) in less than four hours.

T F 22. It is not necessary to use a thermometer to test the temperature of foods. The "feel" of the container is sufficient.

T F 23. Leftovers should *not* be mixed with fresh food portions.

T F 24. Table busers should not handle clean place settings after wiping tables and busing soiled dishware until they have washed their hands.

T F 25. Food-contact surfaces of equipment should be cleaned and sanitized after every use.

T F 26. Cloths used to clean equipment can contaminate foods.

T F 27. Bacteria cannot live in tobacco, so it is not necessary to wash hands after smoking while on break.

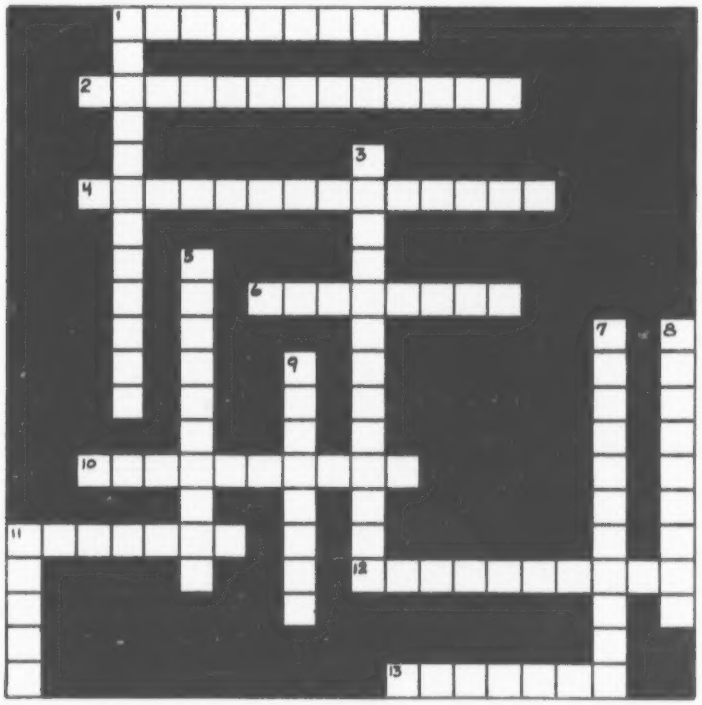
T F 28. Hair is a prime breeding-ground for bacteria. For that reason, it should be kept back off the face.

When you have finished the pre-test, go over the answers with your teacher. Use the following chart to rate yourself according to the number of questions you answered incorrectly.

0-3 errors: You have done your job well. You understand the habits and practices that good sanitation requires.
4-6 errors: Not bad. You need to review the subject.
7-11 errors: Getting serious. You might be endangering your customer's health.
12 or more errors: Dangerous lack of understanding. Immediate training necessary.

ACTIVITY 6-4

DIRECTIONS: Fill in the crossword puzzle using the missing words from the clues related to sanitation codes and food-borne illnesses below.



ACROSS CLUES

1. A food-borne __ __ __ __ __ __ __ __ __ is a disease caused by eating food which contains harmful microorganisms.
2. __ __ __ __ __ __ __ __ __ __ __ __ __ health authorities enforce laws which affect food service businesses daily.
4. The four types of __ __ __ __ __ __ __-__ __ __ __ __ __ __ which affect food are bacteria, viruses, yeasts, and molds.
6. The primary goal of food service sanitation is to protect the __ __ __ __ __-__ __ __ from food-borne illness.
10. __ __ __ __ __ __ __ __ __ __ involves the creation and maintenance of conditions favorable to good health.
11. __ __ __ __ __ __ __ agencies which make sanitation standards are the FDA, USDA, and U.S. Center for Disease Control.
12. Inspections are made by a __ __ __ __-__ __ __ __ __ __ __, a represenative of the state or local government.
13. __ __ __ __ __ __ __ cause illnesses such as colds and influenza.

DOWN CLUES

1. A food-borne __ __ __ __ __ __ __ __ __-__ __ __ __ is an illness caused by poisons or toxins in the food a person eats.
3. Food service sanitation standards are established by laws known as __ __ __ __-__ __ __ __ __ __ __ __ __.
5. __ __ __ __ __ __ __ __ __ __ __ hazards result from harmful microorganisms.
7. __ __ __ __ __ __ __ __ __ __ __ __ of the food service facility are the most visible aspect of sanitary codes.
8. A __ __ __ __-__ __ __ __ __ __ illness is a disease that is carried or transmitted to people by food.
9. __ __ __ __ __ __ __ __ are small, single-celled organisms that can live anywhere people can.
11. Yeasts and molds are __ __ __ __ __ which may or may not be harmful to humans.

ACTIVITY 6-5

DIRECTIONS: Unscramble the following food-borne illnesses of bacterial origin. Write the words on the broken lines. After you discover each illness, list two examples of foods usually implicated by the illness and two techniques for prevention of the illness. Write your examples on the solid lines.

1. oclstayhcospcu esauur

   _

   Foods implicated: ____________________

   ____

   Prevention: ____________________

   ____

2. dmicliotsru lmibtonuu

   _

   Foods implicated: ____________________

   ____

   Prevention: ____________________

   ____

3. tdcmliiosru fgpnireren

   _

   Foods implicated: ____________________

   ____

   Prevention: ____________________

   ____

4. alslmanoel

   _ _ _ _ _ _ _ _ _ _

   Foods implicated: ____________________

   ____

   Prevention: ____________________

   ____

7

Chapter Seven Nutrition

COMPETENCIES TO DEVELOP

- Use nutritional information in meeting dietary needs of persons of various ages.
- Use food preparation techniques which conserve nutrients.
- Display awareness of various factors which affect eating habits.

OBJECTIVES TO ACHIEVE

- Describe the functions of food.
- Describe the sources and functions of specific nutrients.
- Summarize food preparation techniques which conserve nutrients.
- Outline the Daily Food Guide.
- Determine factors which influence eating habits.
- Determine the nutritional needs of persons of various ages.

Food provides the body with the fuel it needs to function properly. Just as an engine cannot run without fuel, neither can the body function without food. An engine runs longer and better with proper types and amounts of fuel. The body also operates longer and more efficiently if provided with the amounts and types of food it needs.

Understanding the effects of food on the body is helpful in working with people in a food service establishment, hospital, nursing home, school, or day care center.

ACTIVITY 7-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

adipose tissue

amino acids

antibodies

ascorbic acid

carbohydrates

chloride

cholesterol

coagulates

collagen

dextrose

enzymes

fat

fortified

glucose

inorganic

iodized salt

lactose

nutrients

phosphorus

polyunsaturated

potassium

roughage

saturated

sodium

sucrose

unsaturated

vitamins A, C, D, E, and K

Additional terms

ACTIVITY 7-2 **DIRECTIONS**: Answer the following questions in the space provided.

1. What are the functions of food?

2. List the five types of nutrients needed by the body:

3. Which three nutrients supply energy?

4. How is the energy value of food expressed? What does this term mean?

5. List one food source for each of the following nutrients. What does each nutrient do?

Protein ____

Starch ____

Polyunsaturated fat ____

Cellulose ____

Calcium ____

Iron ____

Riboflavin ____

Fructose ____

Cholesterol ____

Niacin ____

Phosphorus ____

ACTIVITY 7-3

DIRECTIONS: Fill in the blank with the word or words that best complete the sentence. Refer to the list of words below for possible answers.

1. Proteins, carbohydrates, fats, vitamins, and minerals are called ________________.

2. The primary purpose of protein is ________________.

3. Nutrients manufactured in plants containing large amounts of sugar and starch are ________________.

4. Each protein is composed of smaller units called ________________.

5. Nutrients from plant and animal sources providing the most concentrated source of energy are ________________.

6. Vitamins A, D, E, and K are called ________________.

7. Bile salts, which are necessary for digestion, are formed with the aid of ________________.

8. Nutrients from animal products such as meat, poultry, cheese, milk, fish, and eggs are referred to as ________________.

9. Inorganic salts that aid in building the bony framework of the body are ________________.

10. Vitamins which dissolve in liquids are ________________.

11. Minerals found in minute quantities in the body are referred to as ________________.

12. An effective way to provide iodine in the body and to prevent goiter is the use of ________________.

13. Something not considered a basic nutrient but which is necessary for good health is ________________.

14. Lack of sufficient food and essential nutrients in the diet results in ________________.

15. Roughage, which provides bulk in the diet, contains ________________.

amino acids
body building
carbohydrates
cellulose
cholesterol
complete proteins
fats
fat-soluble vitamins
iodized salt
malnutrition
minerals
nutrients
trace minerals
water
water-soluble vitamins

ACTIVITY 7-4

DIRECTIONS: Place the letter of each nutrient in the blank to the left of its function. Use each letter only once.

FUNCTION

____ 1. Helps eyes adapt to darkness; promotes unblemished skin.

____ 2. Prevents goiter; needed for proper functioning of thyroid gland.

____ 3. Builds strong, straight bones; helps in the clotting of blood; contributes to strong teeth and normal heartbeat.

____ 4. Contains sugar and starch, which are changed into a form usable as energy.

____ 5. Builds red blood cells.

____ 6. Helps burn food in the body; prevents beriberi.

____ 7. Builds bones and teeth; aids in clotting of blood.

____ 8. Helps to form healthy gums and teeth.

NUTRIENT

A. Calcium
B. Carbohydrate
C. Iodine
D. Iron
E. Phosphorus
F. Vitamin A
G. Vitamin B complex
H. Vitamin C

ACTIVITY 7-5

DIRECTIONS: Match each food with the correct food group. Place the letter of the food group in the blank to the left of each food. The letters may be used more than once.

FOOD

____ 1. Cottage cheese

____ 2. Lentils

____ 3. Liver

____ 4. Jam

____ 5. Broccoli

____ 6. Rolled oats

____ 7. Chicken

____ 8. Ice cream

____ 9. Soft drinks

____10. Noodles

____11. Cabbage

____12. Flour

____13. Candy

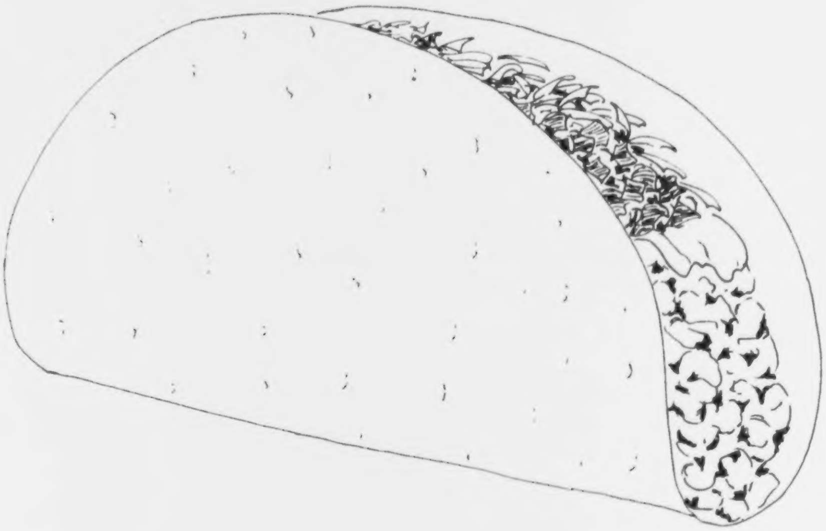
____14. Ham

____15. Yogurt

____16. Orange juice

FOOD GROUPS

A. Milk and Milk Products
B. Meat and Legumes
C. Vegetable and Fruit
D. Bread and Cereal
E. Fats, Sweets, and Alcohol



ACTIVITY 7-6

DIRECTIONS: Name the food groups contained in a Taco. List the specific food (FOOD REPRESENTATIVE) which belongs in each category. Then, tell the main nutrient(s) provided in each category from each of these foods.

FOOD GROUPS	FOOD REPRESENATIVE	NUTRIENT(S) PROVIDED
1.		
2.		
3.		
more?		

What other food(s) can you think of that contain several of the food groups all in one dish or entree? List these here.

1. ________________________________
2. ________________________________
3. ________________________________
4. ________________________________

ACTIVITY 7-7

DIRECTIONS: In the chart below, record under the correct food group the number of servings you eat at each meal during the next weekdays. Do not change your regular diet habits. Make a new two day chart for the weekend and compare weekdays to weekends. How do your dietary habits change?

INDIVIDUAL DIET STUDY

Day	Milk and Cheese	Meat, Poultry, Fish, and Beans	Vegetables and Fruits	Bread and Cereal	Fats, Sweets, and Alcohol
First					
Breakfast:					
Lunch:					
Dinner:					
Snack:					
Total Servings:					
Second					
Breakfast:					
Lunch:					
Dinner:					
Snack:					
Total Servings:					
Third					
Breakfast:					
Lunch:					
Dinner:					
Snack:					
Total Servings:					
Fourth					
Breakfast:					
Lunch:					
Dinner:					
Snack:					
Total Servings:					
Fifth					
Breakfast:					
Lunch:					
Dinner:					
Snack:					
Total Servings:					

ACTIVITY 7-8

DIRECTIONS: Review your diet study (from ACTIVITY 7-7). Record the number of servings you ate each day under the appropriate group.

FOLLOW-UP CHART

Day	Milk and Cheese	Meat, Poultry, Fish, and Beans	Vegetables and Fruits	Bread and Cereal	Fats, Sweets, and Alcohol
ONE					
TWO					
THREE					
FOUR					
FIVE					

Use the Daily Food Guide to analyze your diet study. Answer the following questions.

1. A. In which food groups did you have the recommended number of servings?

   B. In which food groups were you lacking the recommended number of servings?

2. Make suggestions or develop a plan for improving your diet by

   A. listing foods which need to be added to your diet.

   B. listing foods which need to be restricted from your diet.

ACTIVITY 7-9

DIRECTIONS: In the space provided, describe how each factor below can influence a person's eating habits. Then circle the factors which you feel influence you the most.

Cultural background: ______________________________

Personal preferences: ______________________________

Season: ______________________________

Age: ______________________________

Health: ______________________________

After describing the factors above, read the following case study and answer the questions.

Case Study:

Jim, Suzy, Mike, Tammy, Lance, and Beth were eating lunch together. Everyone, except Beth, was eating a candy bar, chips, and a coke for lunch. Beth was eating a tuna fish sandwich, apple, and milk for her lunch. What factors are influencing most of the groups eating habits? What factors influence Beth's eating habits? What would you be eating if you were eating with the group? What would influence your decision?

____

____

____

____

____

ACTIVITY 7-10

DIRECTIONS: Determine the nutritional needs for persons of various ages by completing the following activity. Circle the T if the statement is true. Circle the F if the statement is false.

T F 1. The elementary age child needs more food than the younger child.

T F 2. A teenage boy needs more iron-rich foods than a teenage girl.

T F 3. Compared with adolescents, adults have a higher need for protein and calcium.

T F 4. The average man or woman aged 55-75 needs 300 to 400 fewer calories per day than those needed during the 35-55 year period.

T F 5. The major nutritional problem of adults is weight control.

T F 6. Older people need larger amounts of the B-complex vitamins.

T F 7. Because of an increase in activity and a rise in basal metabolism, adolescents require less food than adults.

8

Chapter Eight
Special Diets

COMPETENCIES TO DEVELOP

- Define and use correct diet terminology.
- Identify menus for general and modified diets.
- Adapt menus for modified diets.
- Follow diet instructions in preparing general and modified diets and diet supplements, and in assembling trays.
- Report patient food response to supervisor.

OBJECTIVES TO ACHIEVE

- Explain the use of cycle menus.
- Summarize special dietary considerations in planning meals for young children.
- Describe requirements for school cafeteria menus.
- Summarize dietary requirements of the sick and aging.
- Define dietary terminology.
- Describe the most commonly used therapeutic diets.

In commercial food service establishments, workers must be able to answer questions from customers about the way foods are prepared and about the ingredients used. They are often asked to suggest menu items which fit the customer's dietary needs. Therefore, food service workers need an understanding of special diets.

ACTIVITY 8-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

anemia
anorexia
cardiovascular
cholesterol
chronic illness
controlled-calorie diet
convalescent
diet supplement
digestion
edema
exchange list
fat-restricted diet
gastrointestinal tract
gram
high-calorie diet
low-calorie diet
malnutrition
metabolism
nourishments
nutritionally adequate
restricted diet
selective menu
sodium
supplementary feedings
sustagen
therapeutic diet

Additional terms

ACTIVITY 8-2

DIRECTIONS: Complete this activity to review the use of cycle menus and the dietary requirements for child care centers and school cafeterias. Fill in each blank with the word or words that best completes the sentence. If you are having trouble completing the sentences, refer to the "HINT" below the activity.

1. __________ are a set of carefully planned menus.
2. Cycle menus save time in __________ planning.
3. Cycle menus cover a period of __________ to __________ weeks.
4. Children's __________ needs are the most important factor influencing the meal and snack requirements in child care facilities.
5. State __________ standards for child care centers contain food service and nutrition guidelines which must be followed.
6. Texas minimum standards require that food served a child cared for from five to nine hours a day meet at least ________ - ________ of the child's daily food needs.
7. Children usually like __________, attractively arranged foods.
8. Children like __________ foods like carrots and crackers.
9. Childhood is a good time to introduce a wide __________ of foods because children are curious and enjoy new experiences.
10. A child care center's menus should reflect the __________ of the children in the center.
11. A menu planning __________ can be established which includes center director, a nutritionist, the cook, a caregiver, and a parent.
12. The major goal of all school cafeteria programs is to serve ________, ________, and ________-________ meals.

HINT: Each of the following is a scrambled word which answers an item above.

1. ceylc umsne
2. nume
3. ehetr, xsi
4. tlantruoini
5. sglceinin
6. eon-drhti
7. flocuorl
8. cyhrcun
9. evytari
10. lsucteru
11. mteceomit
12. tvctaretai, tsniuotriu, wol-edperi

ACTIVITY 8-3

DIRECTIONS: Evaluate these school lunch menus to determine if they fit the Federal Government's School Lunch Pattern guidelines: pleasing and acceptable food combinations: variety of foods from day to day; color, texture, flavor, size, and shape of the foods. Write the strengths and weaknesses for each day in the space provided.

Week 1

Day 1

Meat Loaf with Gravy
Buttered rice
Green beans
Blueberry muffin
Grapefruit sections
Milk

Critique day one:

Strengths:

Weaknesses:

Day 2

Orange juice
Submarine sandwich
Buttered carrots
Cup Cake - white icing
Milk

Critique day two:

Strengths:

Weaknesses:

Day 3

Apple juice
Beef on rice
Broccoli and cheese
Sliced tomato
Hot rolls - butter
Spice cake
Milk

Critique day three:

Strengths:

Weaknesses:

Day 4

Baked fish
Scalloped potatoes
Tomato salad
Applesauce
Hushpuppies

Critique day four:

Strengths:

Weaknesses:

Day 5

Pizza, (hamburger)
Buttered Peas
Green Salad
Cheese drop biscuit
Brownie
Milk

Critique day five:

Strengths:

Weaknesses:

ACTIVITY 8-4

DIRECTIONS: "Step up" to meeting sick and aging dietary problems by answering the items on the staircase below. Begin with the bottom step. Write your answer to each question in the blanks provided below the staircase.

6. Define "ambulatory."

5. Nursing home residents have adjustments to make to their new life. What might some of these adjustments include?

4. In what two ways might a resident's emotional reactions to nursing home living affect his or her eating habits?

3. List two advantages of having dining room service for residents and patients?

2. Sometimes a chronic illness makes elderly people or sick people feel discouraged or depressed. What might this attitude result in?

1. Food means different things to different people. Name the two basic needs that food helps to meet for nursing home patients.

1. ______________________________

____

2. ______________________________

____

3. ______________________________

____

4. ______________________________

____

5. ______________________________

____

6. ______________________________

____

ACTIVITY 8-5 DIRECTIONS: Place the letter of the therapeutic diet in the blank to the left of its description. Each letter will be used once.

DIET DESCRIPTION

_____ 1. A diet for patients who have difficulty chewing or swallowing.

_____ 2. Supplies few nutrients but does give necessary fluids for one or two days.

_____ 3. Liquid diet that supplies all nutritional needs and can be used for a longer period of time.

_____ 4. Restricts certain types of foods and specifies exact amounts of protein, fat, and carbohydrate.

_____ 5. Nutritionally adequate, but low in calories. Sometimes used in diets for cardiovascular patients.

_____ 6. May be used for patients with disorders of the digestive system or persons too weak to chew.

_____ 7. Diet of mild-flavored foods often used for ulcer patients.

_____ 8. Used for edema related to heart conditions and toxemia of pregnancy.

_____ 9. Nutritionally adequate weight reduction diet.

_____ 10. Used to maintain weight without gaining or losing.

THERAPEUTIC DIET

A. Bland
B. Calorie-controlled
C. Calorie-restricted
D. Clear liquid
E. Diabetic
F. Fat-restricted
G. Full-liquid
H. Liquid
I. Soft
J. Sodium-restricted

ACTIVITY 8-6 **DIRECTIONS**: Answer the following in the space provided.

1. Review the following menu and decide which foods would be altered or changed on a fat-restricted diet:

Fried Chicken Breasts
Potatoes Au Gratin
Asparagus
Sliced Tomatoes
Peach Cobbler

2. Below are some of the conditions listed on the menu diet chart in the dietary office. List a type of diet which might be served to each patient.

a. Mr. Brown....Internal open lesions

b. Mrs. Garcia ...No dietary modification

c. Mr. Landa ...Extremely overweight

d. Mrs. Jennings....Nutritionally adequate diet (patient has no teeth)

3. From the following list of foods, pick out the ones which would *not* be served to patients on:

a. a bland diet.

b. a sodium-restricted diet.

c. a diabetic diet.

cooked pears
cottage cheese
soft-cooked eggs
fried shrimp
white pepper
cream of wheat
ketchup
cauliflower
plain cake
cream of chicken soup
fried ham
potatoes
candy
sweet potatoes

4. Harry Brown, an ulcer patient, was sent a tray with the following food items: Waldorf salad, club steak, mashed potatoes, and ice cream. The tray card indicated he should have a soft diet. Which items are not appropriate for a soft diet?

ACTIVITY 8-7

DIRECTIONS: The following people have written in to your newspaper column, "Dear Dietitian." These people write in about the diets their doctors have put them on along with various other questions. On a separate sheet of paper you, the dietitian, write back an answer to the questions. Other information might need to be included in the answer to help the writer to better understand the condition. The dietitian could also recommend other ways to prepare the food without violating the diet, that could make the foods more appetizing.

Dear Dietitian:

My doctor has placed me on a bland diet for the next few weeks. The doctor gave me a list of foods but they all seem so boring. Could you tell me what foods I really need to stay away from? Also could you give me some suggestions for preparation and serving?

Sincerely,
Bland in East Texas

ANSWER: Dear Bland:

Dear Dietitian:

My husband is diabetic. I am not sure that I understand the exchange list process. Also, we are having a problem with meal preparation. It is hard for us to plan a meal that satisfies the children, my husband, and me. I do not like to put things out on the table in front of my husband that he cannot eat. Do you have any suggestions for us?

Sincerely,
Craving Carbohydrates in the
Panhandle

ANSWER: Dear

Dear Dietitian:

My mother has edema, so her doctor put her on a salt-restricted diet. I am trying to help her stick to this diet. What can I do to help her enjoy food the way she did in the past? How can I keep her from wanting to sprinkle salt on her food during preparation and at mealtimes?

Sincerely,
Sodium Sal

ANSWER: Dear

Dear Dietitian:

My sister needs to lose about 20 pounds. She has tried diet after diet and nothing seems to work for her. Do you have any suggestions?

Sincerely,
Concerned Connie

ANSWER: Dear

9

Chapter Nine
Tools and Utensils

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.

OBJECTIVES TO ACHIEVE

- Differentiate between tools and utensils.
- Describe procedures for using cutting devices safely.
- Select appropriate tools for food preparation and service tasks.
- Select appropriate utensils for food preparation and service tasks.

Essential to efficiency and quality in food preparation in the food service industry is a knowledge of small equipment and its proper use. Accurate use of measuring equipment contributes to consistent quality. Customer satisfaction is increased by the use of decorating equipment to create appealing food. The food service employee's provision of proper serving equipment also contributes to customer satisfaction and to the atmosphere of the establishment.

Using small equipment designed for specific jobs helps provide the safe and sanitary environment necessary in a food service establishment.

ACTIVITY 9-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

au gratin dish
brasier
chafing dish
China cup
confectionary thermometer
molds
paddle
pastry bag
rechaud lamp
rotary beater
samovar
sieve
service wagon
sizzle platter
skimmer
thermostat utensils
trivet or roasting pan

Additional terms

ACTIVITY 9-2 **DIRECTIONS**: Answer the following questions in the space provided.

1. How are tools and utensils different?

2. Why should standard measures be used in food preparation?

3. Why is it recommended that glass measuring cups not be used in food service establishments?

4. List two guidelines that food service workers should observe when using cups and spoons for measuring.

5. List two practices that food service workers should observe when caring for measuring equipment.

6. Describe the procedure that should be used for measuring each of the following:

   a. Brown sugar ______

   b. Solid shortening ______

   c. Pinch of salt ______

   d. Water ______

   e. 1/8 t. cinnamon ______

   f. Flour ______

   g. Confectioner's sugar ______

7. What type of thermometer is used to measure the temperature of each of the following?

   frosting or candy ______

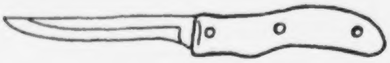
   meat ______

   fat ______

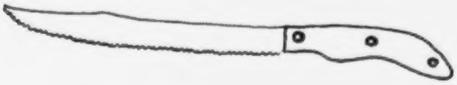
   air ______

ACTIVITY 9-3

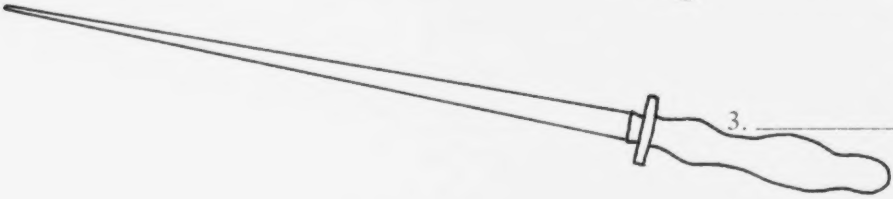
DIRECTIONS: Identify the cutting tools in the illustrations on the left. Write the name of the cutting tool in the blank to the right of each number.



1. ______________________

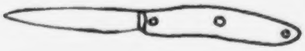


2. ______________________

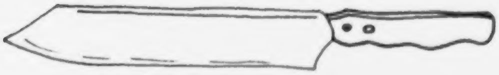


3. ______________________

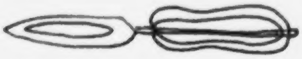
4. ______________________



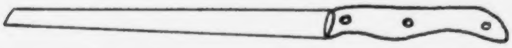
5. ______________________



6. ______________________



7. ______________________



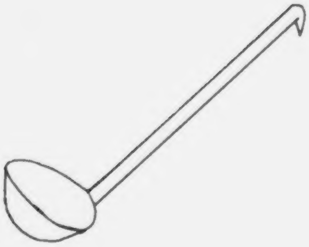
8. ______________________

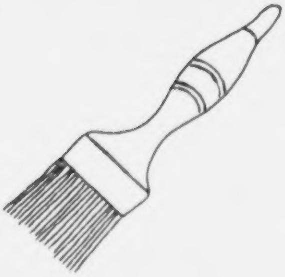
Identify the cutting tool illustrated in Items 1-9 that you would use for each of the tasks listed below. Write the number of the cutting tool in the blank to the left of each task. Numbers may be used more than once.

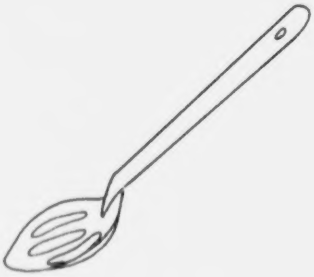
FOOD PREPARATION TASKS

_____ 9. Cutting cakes
_____10. Peeling carrots
_____11. Coring lettuce
_____12. Slicing bread
_____13. Slicing raw fruits
_____14. Paring fruits and vegetables
_____15. Slicing tomatoes

ACTIVITY 9-4 **DIRECTIONS**: Identify the hand tools below and give their main use. Write your answers on the lines below each tool.



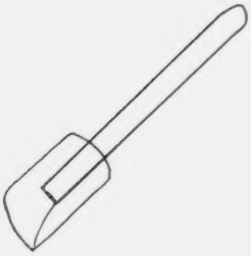


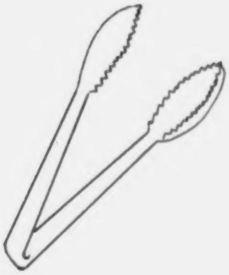


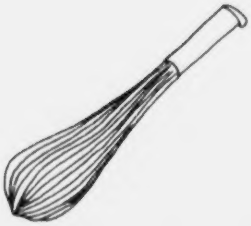
1. ______________________
____
____
____
____

2. ______________________
____
____
____
____

3. ______________________
____
____
____
____







4. ______________________
____
____
____
____

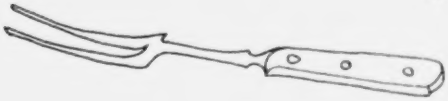
5. ______________________
____
____
____
____

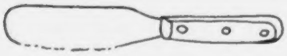
6. ______________________
____
____
____
____

ACTIVITY 9-5

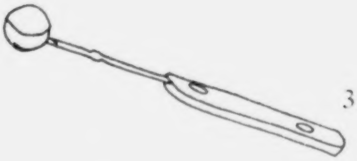
DIRECTIONS: Identify the hand tools below. Write the name of the tools pictured in the corresponding blank.

1. ______________________

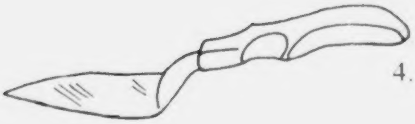




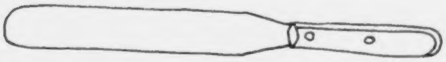
2. ______________________



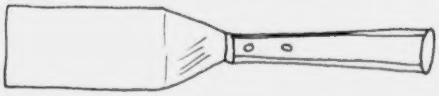
3. ______________________



4. ______________________



5. ______________________



6. ______________________

ACTIVITY 9-6

DIRECTIONS: Match the hand tool with the task. Place the letter of the hand tool in the blank to the left of each task. The letters may be used more than once.

Task

______ 1. spreading sandwiches

______ 2. turning steaks or hamburgers

______ 3. cutting meat loaf

______ 4. loosening food from pans

______ 5. holding meat while slicing

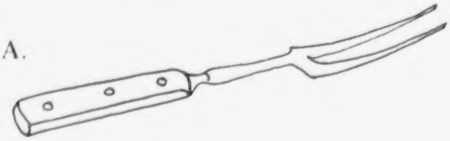
______ 6. serving pie

______ 7. turning a roast

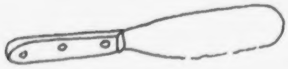
______ 8. frosting cakes

Hand Tools

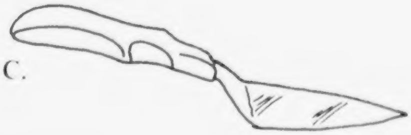
A.



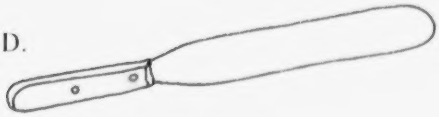
B.



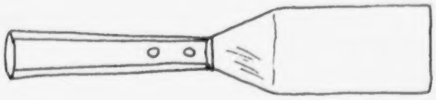
C.



D.

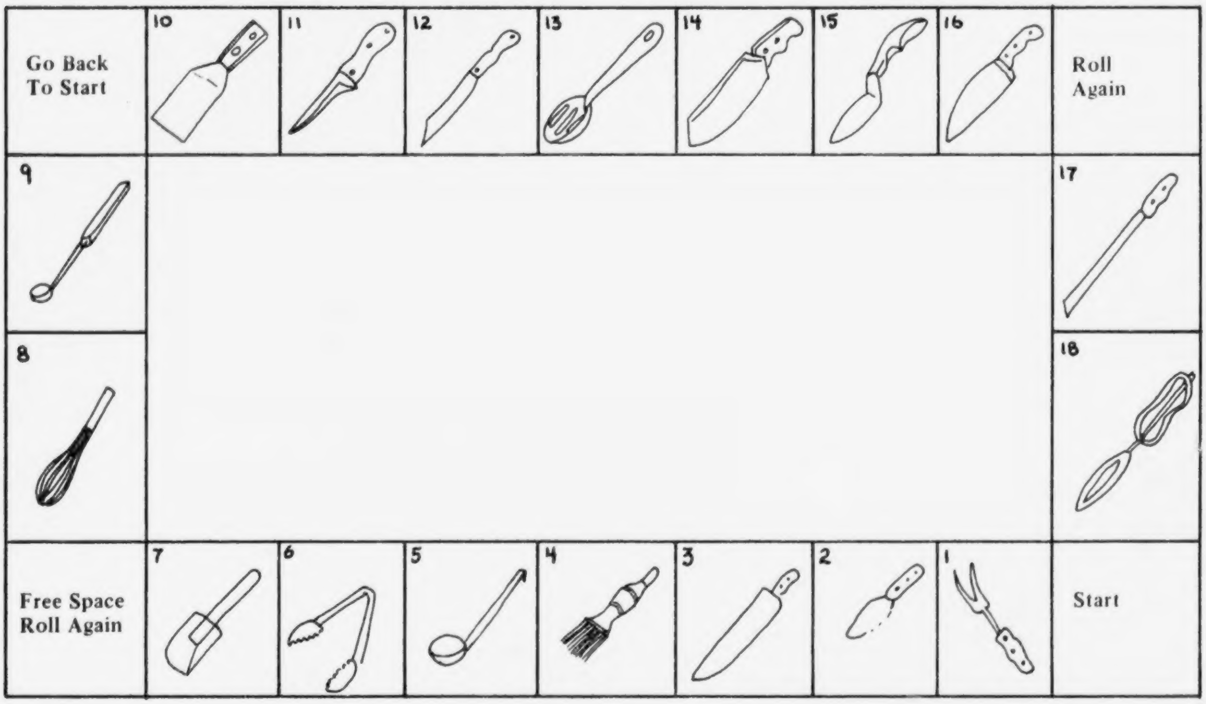


E.



ACTIVITY 9-7

DIRECTIONS: To review the tools used in food preparation and service, play the following game. Fold a piece of paper until it has four sides. Tape the two open edges together (the two ends will be open). You now should have a cube, like dice. Number the dice sides from 1 to 4. Proceed to play tool monopoly by rolling the dice and moving that many spaces. Use your imagination to decide what to use or make for a token to hold your place. Name the tool in the square you land on. Write the name of the tool in the blank below which corresponds to the number of the monopoly square. Continue the game around the board until you have named all of the tools on the board.


Go Back To Start
10
11
12
13
14
15
16
Roll Again
9
17
8
18
Free Space Roll Again
7
6
5
4
3
2
1
Start

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

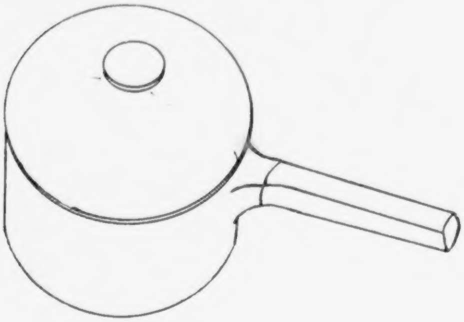
18.

ACTIVITY 9-8

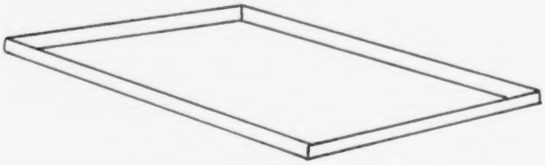
DIRECTIONS: In the space provided, write a brief description for the use of each pan illustrated.

UTENSIL **USE**

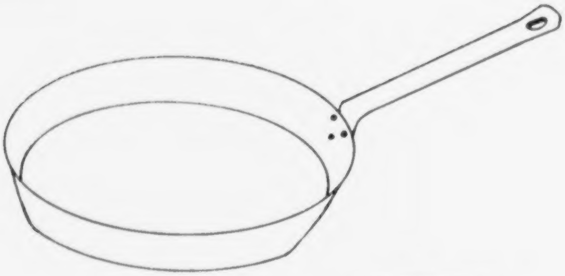
Saucepan



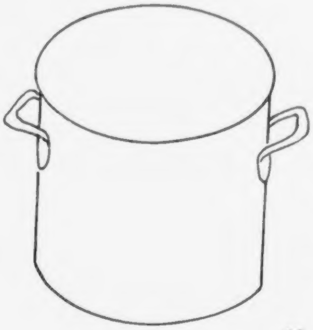
Baking sheet

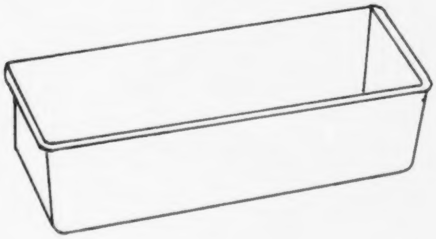
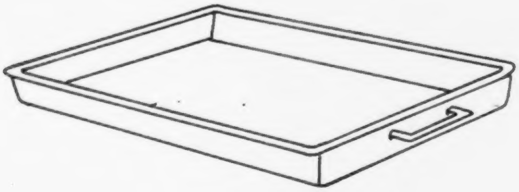
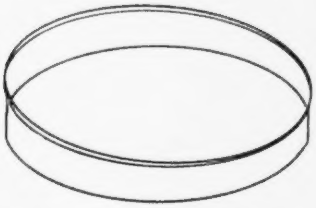
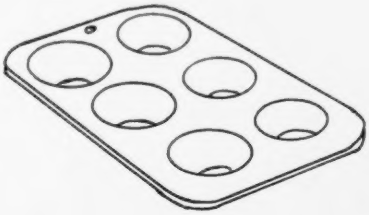


Skillet



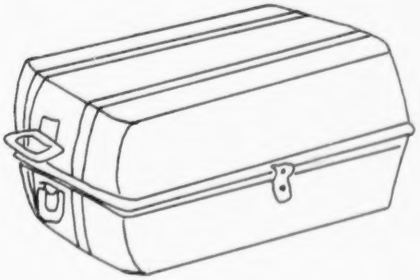
Stock pot



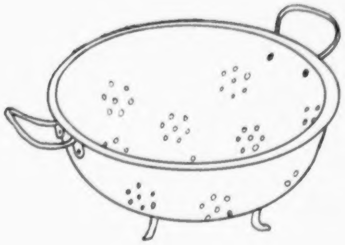
UTENSIL	USE
Loaf pan 	
Bake pan 	
Cake pan 	
Muffin pan 	

UTENSIL **USE**

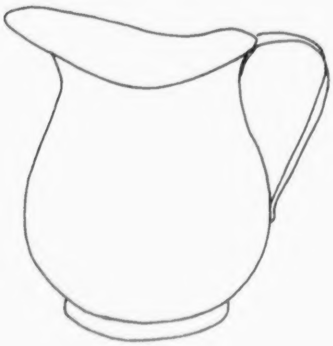
Roasting pan



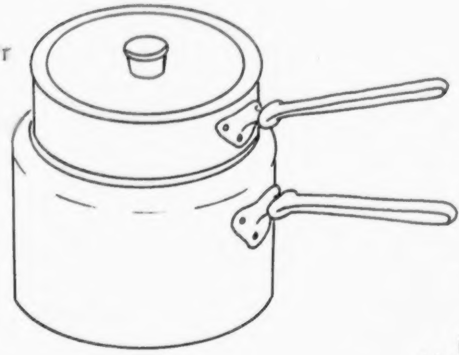
Colander



Pitcher



Double boiler



10

Chapter Ten
Food Preparation Equipment

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.

OBJECTIVES TO ACHIEVE

- Summarize use and care procedures for food preparation equipment.
- Outline appropriate use and care for cooking equipment.

Because of the variety of food service establishments, a knowledge of general and specialized cooking equipment is needed to become a skilled and successful food service employee. Large equipment represents a large monetary investment; therefore, students desiring employment as food service employees should learn the proper use and care of equipment. If equipment is used and maintained properly, it can be expected to give good performance for many years.

ACTIVITY 10-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

attachment ______
balances ______
beater ______
bench model mixer ______
brick-lined or hearth oven ______
convection steamer ______
conveyor toaster ______
decanter ______
fryer ______
gauge ______
pizza oven ______
pumice brick ______
reconstitution oven ______
revolving or carousel oven ______
scales ______
stack oven ______
seasoned ______
splashback ______
steam-jacketed kettle ______
urn ______
whip ______

Additional terms

ACTIVITY 10-2 **DIRECTIONS**: Match the scales to the appropriate function. Place the letter of the scales in the blank to the left of each function.

FUNCTION

______ 1. Weighing servings of food and rolls

______ 2. Weighing dry ingredients such as beans, macaroni, rice, cheese, fruits, and vegetables

______ 3. Weighing ingredients or scaling dough

______ 4. Weighing batters and mixes

SCALES

A. Baker's scale

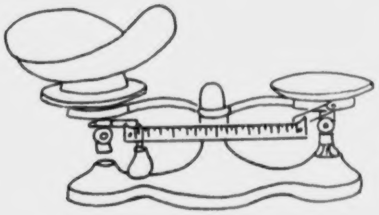
B. Balance scale

C. Portion scale

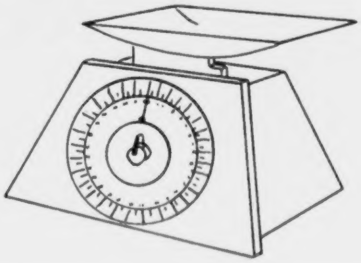
D. Spring

ACTIVITY 10-3 **DIRECTIONS**: Look at each illustration below. In the blanks below each illustration, write the name of the scale being illustrated and briefly describe the procedure for operating the scale.

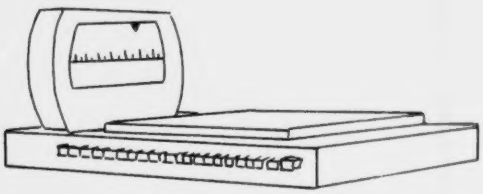
1.



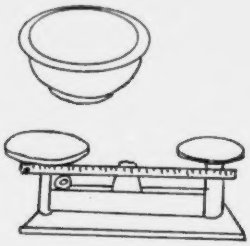
2.



3.



4.



ACTIVITY 10-4

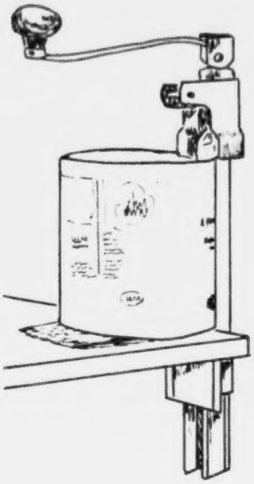
DIRECTIONS: Answer the following questions related to can openers in the space provided.

1. What is the function of a commercial can opener?

2. Why is it important to check the blade of the can opener for nicks and grooves?

3. Why should the blade of a can opener be wiped with a damp cloth after each operation?

4. What is the procedure for cleaning electric can openers?



ACTIVITY 10-5

DIRECTIONS: To review cutting equipment, fill in each blank with the word or words that best complete the sentence.

1. The __________ __________ is used for slicing meats, cheese, fruits, vegetables, and bread.

2. Always keep hands away from __________ when the food slicer is in operation.

3. When the food slicer is not in use, it should be ______________.

4. Always make certain the switch is off and the plug pulled out of the wall socket before __________ the slicer.

5. After cleaning the slicer, replace the blade __________ immediately to prevent injury.

6. When using a food cutter or chopper, wait until __________ have stopped revolving before removing food or cleaning.

7. To prevent damage to knives and gears, do not use the food cutter for cutting __________ with bones or gristle.

8. Clean the food cutter daily following the directions of the ______________.

9. A ______________ ______________ accomplishes the task of a food cutter or chopper in addition to other tasks usually done with knives, graters, mixers, etc.

10. Use the food __________ instead of your hands for feeding food into the food processor.

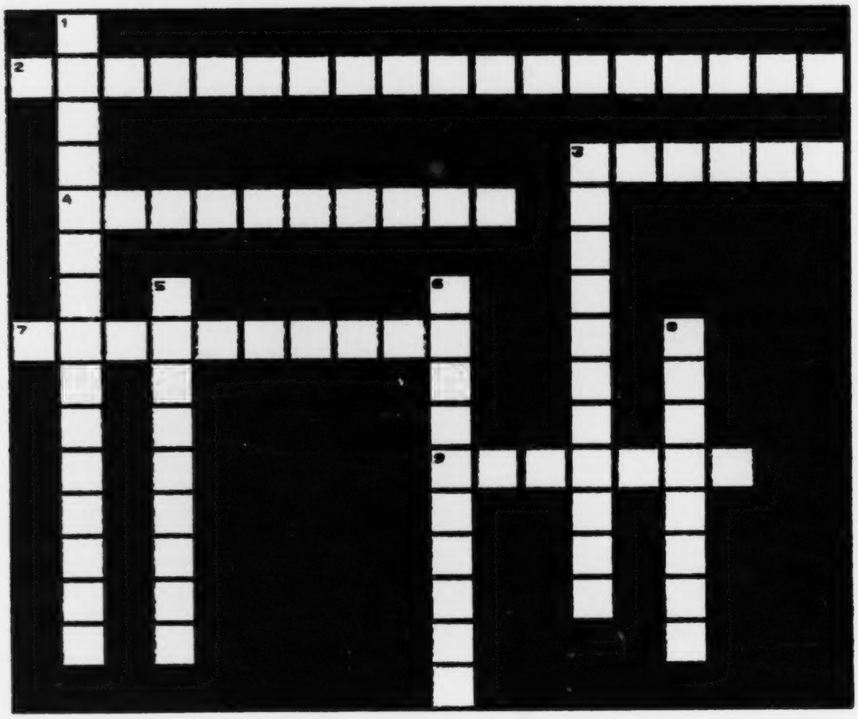
11. Never immerse the __________ of the processor in water.

12. Vegetable peelers remove the skin from potatoes and other vegetables by rotating the vegetables against an __________ surface.

ACTIVITY 10-6

DIRECTIONS: To review the uses of mixing equipment, complete the following crossword puzzle.

USES OF MIXING EQUIPMENT



ACROSS CLUES

2. Used for chopping raw or cooked meat, vegetables, and dried fruits.
3. Used to push the food through the chopper.
4. Type of mixer used for mixing, creaming, or beating ingredients for cakes, batters, doughs, etc.
7. Type of mixer used for mixing and blending ingredients or for incorporating air into the product.
9. Used for high-speed blending, pulping, or mixing of meat, fish, vegetables, fruits or beverages.

DOWN CLUES

1. Special attachment for slicing, grating, or shredding vegetables and cheese.
3. Used for combining shortening and flour by a cutting action.
5. Used for mixing heavy doughs requiring a folding and stretching action.
6. Used for general mixing.
8. Used for incorporating air into light mixtures.

ACTIVITY 10-7

DIRECTIONS: Unscramble the following words related to beverage equipment. Write the word on the broken lines. After you discover each answer, briefly describe how the equipment works and how it should be cleaned. Write your answer on the solid lines.

1. fecfoe wrbeer __ __ __ __ __ __ __ __ __ __ __ __

____

____

____

____

____

2. eat srpdesnie __ __ __ __ __ __ __ __ __ __ __ __

____

____

____

____

____

3. tmactuoai vgbaeere dsepinrse

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __

__ __ __ __ __ __ __ __ __

____

____

____

____

____

4. clertice nur __ __ __ __ __ __ __ __ __ __ __

____

____

____

____

____

5. cie kgiman cmhiane __ __ __ __ __ __ __ __ __

__ __ __ __ __ __ __

____

____

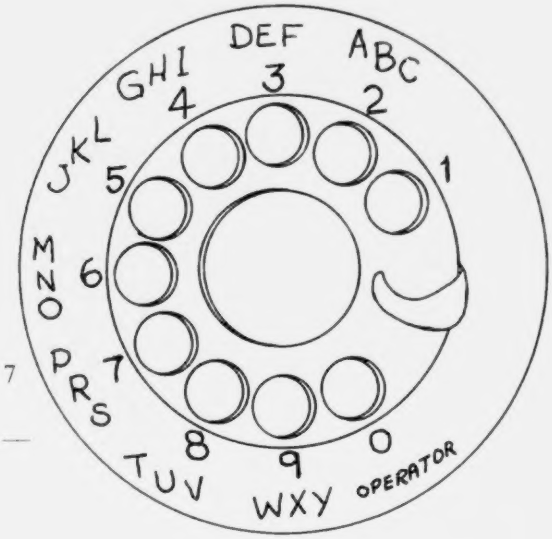
____

____

____

ACTIVITY 10-8

DIRECTIONS: Using the numbers listed below, "dial" the correct word(s) associated with cooking equipment. Write the word(s) in the blanks provided.


DEF
ABC
GHI
3
4
2
JKL
5
1
MNO
6
PRS
7
8
9
0
TUV
WXY
OPERATOR

7 8 3 2 6 3 7

1. _ _ _ _ _ _ _

2 7 6 4 5 3 7

2. _ _ _ _ _ _ _

4 7 4 5 5

3. _ _ _ _ _

3 3 3 7 3 2 8 3 7 9 3 7

4. _ _ _ _   _ _ _   _ _ _ _ _

6 4 2 7 6 9 2 8 3

5. _ _ _ _   _ _ _ _ _

7 3 4 8 5 2 7 6 8 3 6

6. _ _ _ _ _ _ _   _ _ _ _

8 6 2 7 8 3 7

7. _ _ _ _ _ _ _

3 9 4 2 8 7 8 4 6 6 3

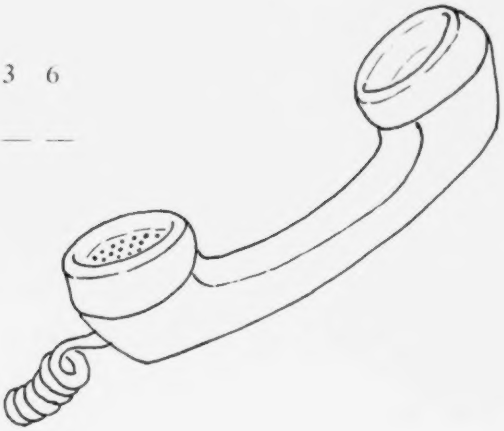
8. _ _ _ _ _ _ _   _ _ _ _

2 6 6 8 3 2 8 4 6 6 6 8 3 6

9. _ _ _ _ _ _ _ _ _ _/ _ _ _ _

7 2 6 4 3 8 6 7

10. _ _ _ _ _   _ _ _



ACTIVITY 10-9

DIRECTIONS: The following incomplete lists deal with cooking equipment. According to the instructions, fill in the blanks in the spaces provided.

1. List three foods which might be cooked using each of the following cooking equipment:

grill __________, __________, __________

deep fat fryer __________, __________, __________

compartment steamer __________, __________, __________

steam jacketed kettle __________, __________, __________

broiler __________, __________, __________

2. Briefly describe the cleaning procedure necessary for the following cleaning equipment:

range top ______________________________

exhaust hood ______________________________

grill ______________________________

broiler ______________________________

toaster ______________________________

3. Briefly describe one advantage of each of the following types of ovens:

microwave ______________________________

stack ______________________________

revolving ______________________________

convection ______________________________

reconstitution ______________________________

11

Chapter Eleven
Cold Storage, Serving, and Cleaning Equipment

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.
- Control and improve sequence of operations.

OBJECTIVES TO ACHIEVE

- State procedures for proper use and care of cold storage equipment.
- Summarize appropriate procedures for use and care of holding and serving equipment.
- Describe procedures for use and care of cleaning and disposal equipment.
- Identify work stations and plan the placement of equipment in these stations.

Large equipment may vary from one food service facility to another. The activities in this chapter will help you to gain a better understanding of cold storage equipment, holding and serving equipment, and cleaning equipment.

ACTIVITY 11-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

conveyor chain
freezer burn
garbage disposer
heated cart
heated pellet
hot and cold cart
infrared lamp
mobile refrigerator
rollwarmer
salad case
steam table
waterless food warmer
work simplification

Additional terms

ACTIVITY 11-2

DIRECTIONS: Unscramble the words listed to the left of each item to complete the statements on the use and care of cold storage equipment.

RECTACLIU 1. When storing food in the refrigerator, you should place items so that air may ________ freely around containers.

VOCRE 2. In order to prevent refrigerated foods from drying out, you should ________ all containers.

SEENSCARY 3. Open the door of a refrigerator only when ________.

DESCOLT 4. Raw meats, fish, and poultry should be stored in the ________ part of the refrigerator.

REETH-TIGHSEH 5. Frost should be removed from the freezer when it has built to a ________-inch thickness.

KIABNG ODSA 6. ________ ________ or a sanitizer can be used to prevent odors in refrigerators and freezers.

NZFORE OOFD 7. ________ ________ should be stored at temperatures of -10 to 0°F.

PRAW 8. ________ all items placed in the freezer to prevent dehydration or freezer burn.

STORF 9. Defrost refrigerators when ________ is 1/4 inch thick on coils or other parts of the interior.

WHATED 10. Use ________ foods within 24 hours.

ACTIVITY 11-3

DIRECTIONS: Read the list of basic steps for effective dishwashing. Arrange the steps in the order of performance. Place a number 1 in the blank to the left of the step you would perform first; a number 2 to the left of the second step; and so on up to number 8 – the eighth step.

_____ Prewash

_____ Rinse

_____ Sanitize

_____ Store

_____ Scrape

_____ Rack

_____ Wash (in machines)

_____ Air dry

ACTIVITY 11-4

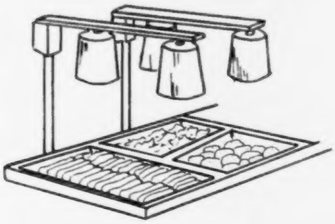
DIRECTIONS: Match the holding and serving equipment to its function. Place the letter of the equipment in the blank to the left of its function. Use each letter only once.

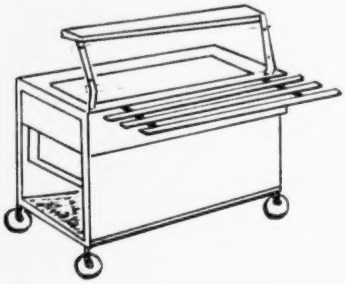
FUNCTION

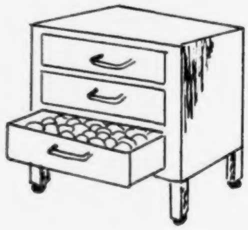
_____ 1. Keeps food warm when placed under trays.
_____ 2. Stores food and distributes them to service area.
_____ 3. Consists of a deep pot for holding water and another pot inside for holding food.
_____ 4. Provides different temperatures for different foods through use of valves and thermostats.
_____ 5. Keeps cold food chilled by having inner lining filled with crushed ice.
_____ 6. Contains refrigerated and heated compartments for trays used in tray delivery.
_____ 7. Keeps food hot and ready for immediate service in cafeterias and buffets.
_____ 8. Using infrared lamps, keeps hot food hot until serving time.
_____ 9. Transports heated foods to the place of service.
_____10. Consists of a refrigerated cabinet with slanted shelves for storage and display.
_____11. Keeps food warm in the kitchen or on the cafeteria counter or buffet.
_____12. Keeps large quantities of breads and sweet rolls warm.

HOLDING AND SERVING EQUIPMENT

A. Bain-marie
B. Cold food server
C. Heated pass throughs
D. Heated carts
E. Heated pellets
F. Hot and cold carts
G. Infrared lamps
H. Mobile refrigerator
I. Rollwarmer
J. Salad case
K. Steam table
L. Waterless food warmer







ACTIVITY 11-5

DIRECTIONS: Place an X in the blank by the letter that best completes the sentence about the use and care of cleaning and dispenser equipment.

1. The most adequate means of waste removal from a food service institution is
   _____ A. selling it to local farmers.
   _____ B. a garbage disposer unit.
   _____ C. an incinerator.
   _____ D. a sanitary landfill.

2. When the garbage disposer is turned on, water flows into it and the grinding blades are
   _____ A. activated.
   _____ B. stationary.
   _____ C. suspended.
   _____ D. stopped.

3. The garbage should be fed into the machine
   _____ A. all at once.
   _____ B. rapidly.
   _____ C. gradually.
   _____ D. in chunks.

4. To be certain all garbage is washed away from the blades, the machine should run for 30 to 45 seconds after
   _____ A. the water is turned off.
   _____ B. all food has been ground.
   _____ C. the blades have stopped.
   _____ D. the food has been put in the disposer.

5. Garbage should be removed from the premises
   _____ A. every other day.
   _____ B. daily.
   _____ C. once a week.
   _____ D. every three days.

6. Large or bulky utensils, such as pots and pans are usually washed in a
   _____ A. single-tank dishwashing machine.
   _____ B. double sink.
   _____ C. commercial dishwashing machine.
   _____ D. three compartment sink.

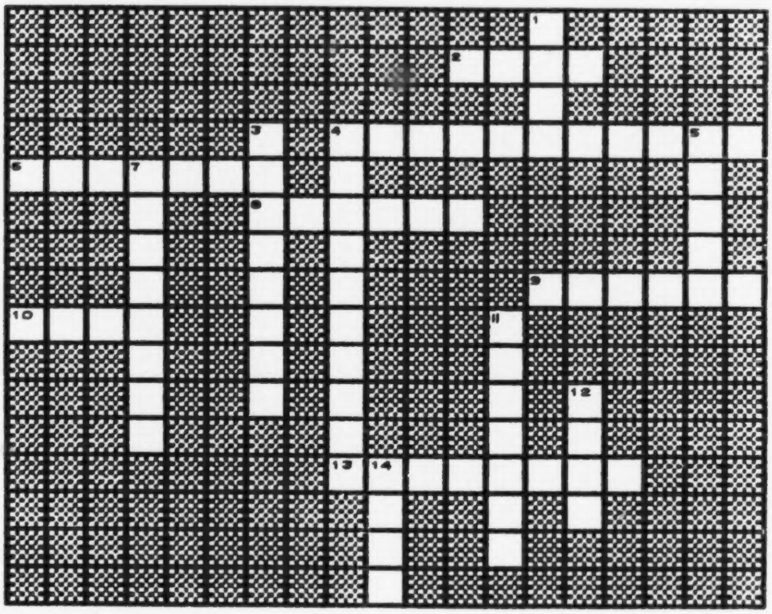
7. When loading the dishwasher observe all the following guidelines except
   _____ A. loading all of one size and type of dish in one rack.
   _____ B. discarding paper and loading heavily soiled dishes first.
   _____ C. placing cups and glasses upside down in dish machine racks.
   _____ D. mixing knives and forks with the spoons to prevent nesting.

614

ACTIVITY 11-6

DIRECTIONS: Fill in the crossword puzzle below using terms related to work stations in food service facilities. If you need help, fill in the blanks in the 10 items below the crossword (A stands for ACROSS; D stands for DOWN).

WORK STATIONS



1. Each food service facility is divided into work centers called _ _ _ _ _ _ _ _ (A-13).

2. Each station is named for the _ _ _ _ (D-14) performed there.

3. _ _ _ _ _ _ (A-8) table service needs more stations than one using _ _ _ _ _ _ _ _ (D-3) service.

4. Typical _ _ _ _ _ _ _ _ _ _ _ _ (A-4) include beverage, cold, hot, bake or serving stations.

5. The number and type of stations depend on the _ _ _ _ (D-12), the type of _ _ _ _ _ _ _ (D-11), and the size of the _ _ _ _ _ _ _ _ (A-6).

6. _ _ _ _ _ _ _ _ _ _ _ _ (D-4) and _ _ _ _ _ _ _ _ _ (D-7) are an important part of all work stations.

7. The work flow in a station is usually from _ _ _ _ (A-10) to _ _ _ _ _ (D-5).

8. The placement of work stations is determined by the flow of _ _ _ _ (A-2) and service.

9. The space available for the kitchen _ _ _ _ _ _ (A-9) the number of stations possible.

10. A restaurant offering a wide variety of food needs _ _ _ _ (D-1) stations than one with a limited menu.

12

Chapter Twelve Food and Supplies

COMPETENCIES TO DEVELOP

- Receive and inspect food and supplies.
- Complete receiving records.
- Prepare food and supplies for storage, and then store.
- Maintain storage facilities at optimum conditions for food preservation.
- Issue and rotate food and supplies.

OBJECTIVES TO ACHIEVE

- Identify the forms and qualities of food available.
- Describe the purposes and uses of food specifications.
- Identify the types of supplies used in food service.
- Describe procedures for receiving and inspecting food and supplies.
- Outline procedures for storing food and supplies.
- Explain requisitioning procedures used in food service.
- Summarize procedures for inventorying food and supplies.

Although items may vary, food and supplies are essential to any food service operation. This chapter includes activities emphasizing the proper procedure for requisitioning and inventorying food and supplies.

ACTIVITY 12-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

blast freezers ____________________

convenience ____________________

first-in, first-out ____________________

imitation ____________________

inventory ____________________

issuing ____________________

nutrition labeling ____________________

perpetual inventory ____________________

physical inventory ____________________

plate freezers ____________________

processed ____________________

purchase orders ____________________

receiving record ____________________

receiving sheet ____________________

receiving stamp ____________________

receiving ticket ____________________

requisitioning ____________________

specifications ____________________

standard ____________________

standardized foods ____________________

style ____________________

trade or common name ____________________

variety ____________________

vendor ____________________

wholesomeness ____________________

written specifications ____________________

Additonal terms

____

____

____

____

ACTIVITY 12-2

DIRECTIONS: Review the forms and qualities of food available and the purposes and uses of food specifications by completing the following activity. First read the statements and fill in the blanks with the word that best completes each sentence. As a hint, the number of letters in the correct answer is shown in parentheses after each blank. If you've filled in the correct answers, you should be able to find each one in the word search. The words run across, up, down, backward, or diagonally. Circle each word you find.

1. __________ (11) forms may be mixes partially processed or ready to serve.
2. Food in the United State must meet rigid standards of __________ (13).
3. __________ (9) foods have undergone treatment to keep them from spoiling.
4. The __________ (4) sets standards of quality for many foods.
5. __________ (5) may be fresh, smoked or cured, canned or frozen.
6. The quality of a __________ (7) is determined by grading.
7. __________ (4) is available fresh, dried, or concentrated.
8. Salting, pickling, and sweetening of methods of __________ (10).
9. __________ (11) forms of foods help to reduce labor costs and ensure consistent quality in the foods served.
10. __________ (7) classifies food according to standards of quality from the most to the least desirable.

WORD SEARCH - USES OF FOOD

R I N E W O K I X L M H Y K P S N F S F I K
W G A O I H C W H O L E S O M E N E S S O A
X S C E Z N Q U B N C N Z F W D H C K O D C
D J I C F P D S O S O L A Q Y E L A N M F Y
V C K N U Y N L C M P W V B M S X A R A S U
U Z J E S B E Q O P G F W E E S M M D N B K
Y H T I G O Q T N U R X P S A E O S N H R G
K A C N J H S V V Z U O R G T C U U B C R C
V I C E C G P P E J D E C C S O A W Q X N R
H H Q V V C R N N V I W M E D R S V B S V X
D P X N T P G N I D A R G K S P O H R Z I M
L G G O J Y B D E O L B I W L S F X Y T W Z
N I H C Y F G R N Q W J F G V I I V F C O L
W F P W V K T W C H P C W R U Z M N K B O D
G A A S X E C T E U P R W T B Y Y Y G G M G
R N V Q T P E X G U R C O O U W T I R H B A
H M A F C X F A T Y U J T D S M N P R H H A
B G R T W Z B M N R O C W N U I K R F J L M
Y R A Z D X Q K Y F W V A F H C X S V E P B
L J T S J X D T W A G I I T T G T N L M R K
H P U E W A W T Y Z H A X V E X K V O S D V
V I A U J A L E K Y O C A T J L T E H B M L

ACTIVITY 12-3

DIRECTIONS: Match each purchase specification with its use in purchasing food and supplies. Place the letter of the specification in the blank to the left of its use. Use each letter only once.

USE

______ 1. Determining how healthful and nutritious a product is

______ 2. Choosing the appropriate type or grade in making substitutions

______ 3. Selecting items with appropriate characteristics

______ 4. Buying amounts that can be used in a reasonable time without waste

______ 5. Buying right amount for number of portions needed

______ 6. Eliminating menu items or making substitutions

PURCHASE SPECIFICATIONS

A. Container sizes
B. Financial factors
C. Grades
D. Use of product
E. Wholesomeness
F. Yields

ACTIVITY 12-4

DIRECTIONS: Prepare a "word-a-gram" using the name of supplies other than food which a food service facility requires to operate. Below is an example using states: (Try to use at least ten items.)

```
    U N I T E D S T A T E S
                      E         V
                      X         I
        M   O       C A L I F O R N I A
    M   A R K A N S A S         G
    I   I   L       R           I
    N   N   A     L O U I S I A N A
    N   E   H       L       D   I
    E       O       I N D I A N A
    S       M       N       H
G E O R G I A       A R I Z O N A
    T               S   O
  H A W A I I           W
                        A
```

Write a short paragraph explaining why supplies vary from one food service establishment to another.

____

____

____

____

____

____

ACTIVITY 12-5

DIRECTIONS: Answer the following exercises about receiving and inspecting food and supplies. Write your answer in the space provided.

1. The person responsible for receiving food service supplies is the ____________________.

2. ____________________ means checking in all purchases as they are delivered.

3. Each item of a delivery must be weighed by the receiving clerk when the establishment uses ____________________.

4. Betty receives the morning delivery of bakery products. She notices that three bread wrappers are broken open. Which is the best course of action for Betty to follow? Select your answer and place a check (✓) in the blank to the left of the appropriate statement. Support your answer by giving reasons for your answer. Write your reasons in the space provided.

   _____ a. Accept the delivery and report the condition of the bread to the manager.
   _____ b. Accept the balance of the delivery but refuse the three loaves of bread.
   _____ c. Check with the supervisor of the receiving area to determine the proper procedure before accepting the delivery.
   _____ d. Call the supplier to explain about the three bread wrappers.

   REASONS:

   ____
   ____
   ____
   ____
   ____

5. Receiving records vary according to the food service establishment. List four items which all receiving records must contain in relation to the food and supplies received.

   ____
   ____
   ____
   ____

6. List four qualifications a person needs to work as a receiving clerk.

   ____
   ____
   ____
   ____

7. Use the information from the delivery invoice below to complete the first 3 columns (Quan., Unit, and Description) on the receiving report on the following page (page 86).

INVOICE No. 7893

A & B FOOD PRODUCTS COMPANY
100 Main
Anytown, Texas

Order No. 725 Date: Sept. 1 19--

TO: Dixie Cafeteria
10 W. 6th
Anytown, Texas

QUANTITY		ITEMS	PRICE	
AMT	UNIT		UNIT	TOTAL
12	1-lb. cans	A.B.C. Ground Black Pepper		
2	30 dz. cases	Sunny Acres Grade A Large Eggs		
4	100-lb. bags	Wheatland All-purpose Flour		
6	#10 cans	Favorite Fruits Sliced Apples		
1	100-lb. sack	Idaho Delight Irish Potatoes		
1	50-lb. sack	Marketplace Onions		

The Receiving Clerk will fill in this information

RECEIVING CLERK'S DAILY REPORT
VENDOR:

No. ____________
Date ____________

Quan.	Unit	Description	Unit Price	Amount	Total Amount	PURCHASE JOURNAL DESCRIPTION		
						Food Direct	Food Stores	Sundries

The Receiving Clerk will fill in this information

Signature ______________________

ACTIVITY 12-6

DIRECTIONS: Place a check in the blank by things you would *not* do if you were assigned to help with the storing of food and supplies. Write the reason for your choice below each statement you check.

_____ a. Place new stock in front of old stock.

____

____

____

_____ b. Cross-stack bags of potatoes.

____

____

____

_____ c. Place foods in walk-in refrigerator close together.

____

____

____

_____ d. Store fish at a distance from milk.

____

____

____

_____ e. Store fruits on shelves not on the floor in walk-in refrigerator.

____

____

____

ACTIVITY 12-7

DIRECTIONS: Review the food and supply terminology by completing the matching exercise. Match the item to its appropriate definition. Place the letter of the term in the blank to the left of each definition.

Definitions

_____ 1. Length of time a product can be stored without serious change in quality.
_____ 2. Supplying each department with the items they request.
_____ 3. Issues food and supplies requisitioned by departments in the food service operation.
_____ 4. Shows how much food is used on a daily basis.
_____ 5. Basis on which foods should be used.
_____ 6. Itemized list of foods and supplies on hand.
_____ 7. To request items for department.
_____ 8. Actual count of food and supplies on hand.

Terms

A. "First in, first out"
B. Inventory
C. Issuing
D. Perpetual inventory
E. Physical inventory
F. Receiving clerk
G. Requisition
H. Shelf-life

13

Chapter Thirteen
Food Preparation Techniques

COMPETENCIES TO DEVELOP

- Adjust standard recipes to serve more or fewer persons than indicated.
- Read and follow recipe instructions.
- Use food preparation and service terms correctly.
- Assemble and prepare ingredients (or suitable substitutes) and equipment.
- Measure and weigh foods according to specifications in standard recipes.
- Use a variety of cooking techniques.
- Identify, use, and store spices, herbs, and extracts properly.
- Utilize convenience foods in food preparation.
- Use correct time and temperatures for energy-efficient food preparation.
- Set up and maintain individual work area utilizing time-and energy-saving techniques.

OBJECTIVES TO ACHIEVE

- Identify the components of a standard recipe.
- Recognize abbreviations used in standard recipes.
- Describe standard substitutions for ingredients.
- Cite equivalents commonly used in food preparation.
- Cite common can sizes and their approximate yields.
- Define food service terminology.
- Adjust recipes to increase or decrease the yield.

- Describe techniques which develop speed and accuracy in recipe use.
- Describe the five categories of cooking used in food preparation.
- Identify seasonings used in food preparation.
- Describe sanitary procedures for tasting food.
- Describe the use of convenience foods in food service.
- Describe work simplification techniques used in food service.
- Describe procedures for portioning foods.
- Outline procedures for plating food.
- Summarize considerations for garnishing food.

Quality food must be produced and served in food service establishments in a given amount of time and at a reasonable cost in order to satisfy both the diner and the management. Labor costs for food preparation make it necessary for the personnel, equipment, and supplies to be organized efficiently. Speed and accuracy are improved by using time and skills wisely. The following activities will contribute to the development of speed and accuracy on the part of the food service employee.

ACTIVITY 13-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

as purchased ______________________________

combination (cooking method) ______________________________

condiment ______________________________

convenience food ______________________________

dry heat ______________________________

edible portion ______________________________

liquid food extracts ______________________________

lukewarm ______________________________

moist heat ______________________________

portion control ______________________________

portioning ______________________________

seasonings ______________________________

standard portions ______________________________

stations ______________________________

time schedules ______________________________

work flow ______________________________

Additional terms

____

____

____

____

____

ACTIVITY 13-2

DIRECTIONS: Review the components of a standard recipe by studying the following recipe. Select a heading from the list below and then write the heading in the appropriate blank on the recipe.

Ingredients
Method
Notes
Portion
Amount
Utensils
Variation
Yield

APPLE DUMPLINGS

Bake: 40-45 min.
Oven: 400°F (205°C)

(1) __________: 50 portions
(2) __________: 1 dumpling

(3) __________: Rolling pin, pastry wheel, No.16 dipper, baking pan, sauce pan

(4) __________	(5) __________	(6) __________
5 lb.	Pastry	Roll to 1/8 in thickness and cut into 5-in. square
12 lb.	Sliced apples, frozen	Place No.16 dipper of apples in center of each pastry square. Fold corners to center on top of fruit and seal edges together. Place in lightly greased baking pans. Prick top of dumplings.
4 lb.	Sugar	Make syrup of sugar, hot water, butter, and spices.
2 qt.	Water, hot	
1 lb.	Butter or margarine	Pour around dumplings. Bake.
2 t.	cinnamon	
2 t.	nutmeg	

(7) __________:
Fresh or canned fruit may be used. The amount of sugar will vary with the type of fruit.

(8) __________:
Peach Dumplings: Substitute peaches for apples.

ACTIVITY 13-3

DIRECTIONS: Write the word for each of the following abbreviations used in standard recipes.

1. 10 Cal. per slice 1. ______________________________
2. 1 lb. sugar 2. ______________________________
3. Cook at 350°F 3. ______________________________
4. 2 c. water 4. ______________________________
5. Beat for 10 min. 5. ______________________________
6. f.g. pepper 6. ______________________________
7. Let stand 20 sec. 7. ______________________________
8. 1 t. salt 8. ______________________________
9. Approx. 300 cookies 9. ______________________________
10. 2 tbsp. chopped onion 10. ______________________________
11. 3 T. cornstarch 11. ______________________________
12. Bake for 1 hr. 12. ______________________________
13. 1 tsp. cinnamon 13. ______________________________
14. 4 T. M.S.G. 14. ______________________________
15. 1 lg. apple 15. ______________________________
16. 5 oz. coconut 16. ______________________________
17. Cool at room temp. 17. ______________________________
18. 1 sml. banana 18. ______________________________
19. Wt. of baked cake 19. ______________________________
20. 5 lb. pkg. 20. ______________________________

ACTIVITY 13-4 **DIRECTIONS**: Write the abbreviations for each word that is in italics in the following recipes.

Chili Con Carne (for 50)

		Amount	Ingredient
________	1.	3 *pounds*	Beans, kidney
________	2.	1 *gallon*	Water, boiling
			ADD
________	3.	9 *pounds*	Beef, ground
________	4.	8 *ounces*	Onion, chopped
			ADD
________	5.	1 1/2 *quart*	Tomato puree
________	6.	2 *ounces*	Chili powder
________	7.	3-4 *ounces*	Cumin seed, ground
________	8.	3 *tablespoons*	Salt
________	9.		Water to make a total volume of 3 *gallons*
________	10.		Let simmer about 3 *hours*
			ADD, while stirring
________	11.	5 *ounces*	Flour
________	12.	2 *cups*	Water, cold

Fudge

		Amount	Ingredient
________	13.	2 *cups*	Sugar
________	14.	2/3 *cup*	Milk
________	15.	1 1/2 *tablespoons*	Light corn syrup
________	16.	2 *squares*	Chocolate
________	17.	*few grains*	Salt
________	18.	3 *tablespoons*	Butter
________	19.	1 *teaspoon*	Vanilla extract

ACTIVITY 13-5

DIRECTIONS: Match the standard substitutions to the ingredients being substituted. Place the letter of the substitution in the blank to the left of each ingredient.

Ingredients

_____ 1. 1 T. cornstarch

_____ 2. 1 sq. chocolate

_____ 3. 1 c. sour milk

_____ 4. 1 c.butter

_____ 5. 1 c. honey

_____ 6. 1 t. baking powder

_____ 7. 1 whole egg

_____ 8. 1 c. cake flour

Substitutions

A. 1-1 1/4 c. sugar plus 1/4 c. liquid

B. 2 T. flour

C. 1/4 tsp. soda plus 1/2 t. cream of tartar

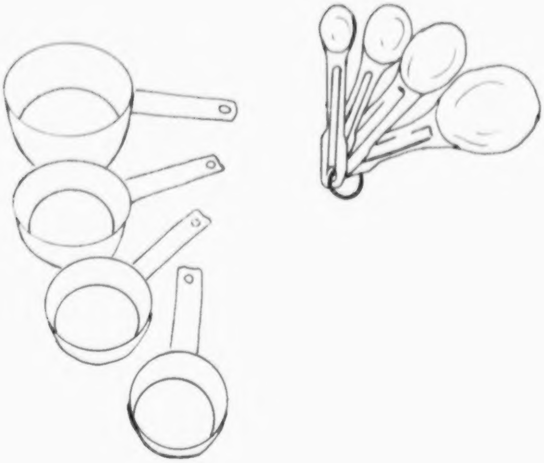
D. 7/8 c. all-purpose flour

E. 3 T. cocoa plus 1 T. fat

F. 2 egg yolks

G. 7/8 c. fat plus 1/2 t. salt

H. 1 c. fresh milk plus 1 T. vinegar or lemon juice



ACTIVITY 13-6 **DIRECTIONS**: Read the following case studies and determine the amount of the substitutions for the ingredients listed in the recipes.

1. Marsha's employer asked her to make a chocolate cake. The recipe called for 2 c. cake flour, 1 2/3 c. sugar, 1/2 c. shortening, 1 t. salt, 3 sq. melted chocolate, 1 c. sour milk, 1 t. soda, 3 eggs, and 1 t. vanilla. On checking her supplies, Marsha found all the needed ingredients except:

   3 sqs. chocolate
   1 c. sour milk
   2 c. cake flour
   1 t. soda

   If Marsha uses cocoa for chocolate, sweet milk for sour milk, all-purpose flour for cake flour, and baking powder for soda, what amount of each of these substitutions will she use?

   ______________________ ______________________
   ______________________ ______________________

2. Marsha wants to make fudge icing for the cake.

The recipe called for:		Marsha found:
2 c. sugar		sugar
1 c. milk	a. *	non-fat dry milk
1/4 t. salt		salt
2 sq. chocolate	b. *	cocoa
2 T. light corn syrup	c. *	cream of tartar
2 T. fat		fat
1 t. vanilla		vanilla

How can Marsha use the starred (*) ingredients as substitutes for the ingredients listed in the recipe? Give the amounts needed in each case and any additional ingredients she will need.

a. ____

b. ____

c. ____

ACTIVITY 13-7 **DIRECTIONS**: Write the metric system equivalent for the following measurements.

1. 3 t. 1. ____________________
2. 16 T. 2. ____________________
3. 8 fl. oz. 3. ____________________
4. pinch 4. ____________________
5. 2 pt. 5. ____________________
6. 16 oz. 6. ____________________
7. f.g. 7. ____________________
8. spk. 8. ____________________
9. 1/4 c. 9. ____________________

ACTIVITY 13-8 **DIRECTIONS**: Read the following case studies and convert the ingredients to the needed equivalents.

1. Josie will help in the baking area this week. She has been asked to double the amount of ingredients in a cookie recipe for the baker. Show what amounts (using the largest measures) are needed of each ingredient after doubling the recipe.

____________________ a. 1 c. sugar

____________________ b. 1 c. margarine

____________________ c. 2 t. vanilla

____________________ d. 12 oz. flour

____________________ e. 2 T. cocoa

2. Lynn's work station for this week is in the serving area. One of his tasks on the work sheet is to prepare 1 1/4 gal. fruit punch. The recipe he is using makes 2 1/2 gal. punch. Show how he will adjust the measurements to fit his task (use largest measures).

____________________ a. 4 1/2 c. sugar

____________________ b. 3 c. water

____________________ c. 2-6 oz can orange juice, frozen

____________________ d. 2-6 oz cans lemon juice, frozen

____________________ e. 1 gal. water makes 2 1/2 gal. punch

3. One of the tasks on Mark's work sheet today is to measure ingredients for apple crisp. A red-penciled note attached to the recipe said "make 3 X the recipe." Complete the blanks to show the largest equivalent measurement he should use when he triples the recipe.

____________________ a. 10 lb. sliced apples

____________________ b. 8 oz. sugar

____________________ c. 1/4 c. lemon juice

____________________ d. 1 lb. 4 oz. margarine

____________________ e. 12 oz. flour

____________________ f. 12 oz. rolled oats, uncooked

____________________ g. 2 lb. brown sugar

4. Ann is preparing a salad by using the ingredients listed below. Convert the amounts called for in the recipe into the largest measures to speed up the measuring process.

____________________ a. 4 qt. lettuce

____________________ b. 2 pts. tomatoes

____________________ c. 2 c. celery

____________________ d. 2 c. radishes

____________________ e. 16 T. oil

____________________ f. 8 oz. vinegar

____________________ g. 3 t. sugar

____________________ h. 3 t. paprika

ACTIVITY 13-9

DIRECTIONS: Review the common can sizes and their approximate yields by providing the information needed in the following situations.

1. Mae is going to prepare a bean salad. The recipe calls for a No. 10 can of French style green beans. She does not find a No. 10 can but there is a case of No. 303 cans on the shelf. How many No. 303 cans will she need?

   ____

   ____

2. Joe is preparing a crab salad. The recipe calls for 2 cups of ripe olives. What size of can should Joe open?

   ____

   ____

3. The recipe that Juan is following for barbecue sauce calls for a No. 10 can of catsup. Juan is going to check the catsup already opened. How many cups of catsup will he need to substitute for the No. 10 can?

   ____

   ____

4. Sue is preparing meatballs and spaghetti. The recipe calls for 5 3/4 cups tomato sauce. What size of can should she use?

   ____

   ____

5. Write the appropriate substitute in the blanks:

Can Size	**Approximate Yield**
(a) 6 oz. can	__________
(b) __________	2 1/2 cup sugar
(c) __________	1 cup
(d) 32 oz.can	__________
(e) No. 303 can	__________

ACTIVITY 13-16

DIRECTIONS: Identify seasonings used in food preparation. Read the name of each seasoning listed and use the following code to indicate the type of seasoning: Sp =spice; H=herb; S=salt; E=extract; C=condiment

1. Worcestershire ____________
2. Peppercorn ____________
3. Clove ____________
4. Vanilla ____________
5. Sea Salt ____________
6. Black pepper ____________
7. Soy sauce ____________
8. Paprika ____________
9. Cinnamon ____________
10. Almond ____________
11. Parsley ____________
12. Ginger ____________
13. Horseradish ____________
14. Monosodium glutamate ____________
15. Chili sauce ____________
16. Nutmeg ____________
17. Sage ____________
18. Oregano ____________
19. Garlic ____________
20. Prepared horseradish ____________

ACTIVITY 13-17

DIRECTIONS: Place an "X" in the space provided to the left of the statements which are sanitary procedures and an "O" to the left of those which are not.

____ 1. Tasting foods indicates if additional seasonings are needed.

____ 2. Tasting foods is a means of quality control.

____ 3. A cooking spoon should never be used for tasting.

____ 4. Quality control depends more on appearance critiques than taste tests.

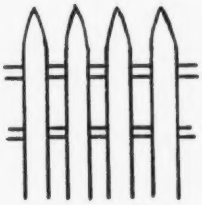
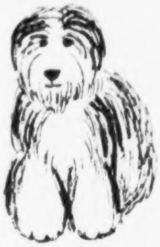
____ 5. Cooks often taste test food by using a tray of clean spoons.

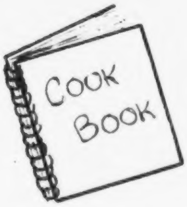
____ 6. In some restaurants, cooks line up to taste food before guests arrive.

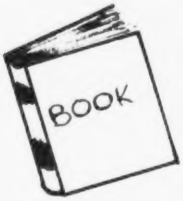
ACTIVITY 13-18

DIRECTIONS: Complete the rebus scramble by writing down each of the words illustrated. Then add or subtract the letters as indicated. Unscramble the remaining letters to identify an item used in many food service establishments.

PUZZLE
HINT:
Partially prepared
food product or
ingredient

V +  + 

− G + q + 

− 

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In the space provided, give two uses of this item in food service establishments.

1. ______________________________

2. ______________________________

ACTIVITY 13-19

DIRECTIONS: Unscramble the words listed to complete the statements about work simplification techniques used in food service. Unscramble the circled letters for a step on utilizing work simplification techniques.

kwornatilcifiopims 1. _ _ _ ○ _ _ _ _ _ _ _ _ _ _ ○ _ _ _ means doing a task in the easiest, simplest, and quickest way.

lotronc 2. A production schedule helps to _ _ _ _ ○ _ _ costs.

mitegammateenn 3. Efficiency of work is affected by ○ _ _ _ _ _ _ - _ _ _ ○ _ _ _ and work motions.

emitdulchsee 4. A _ _ _ _ _ _ _ _ ○ _ _ _ list daily assignment tasks, and time allotted for tasks.

gaitefu 5. Work simplification helps to reduce _ ○ _ _ _ _ _.

tropicondudsuleech 6. The amount of food prepared, the expected yield, the actual yield, the number of servings and the amount left are usually shown on a _ ○ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ ○.

tinmoos 7. Work simplification elminates unnecessary steps and wasted _ ○ _ _ _ _ _.

topducrivity 8. Workers can increase their _ ○ _ _ _ _ _ _ _ _ _ _ _ by making the most of every motion.

rowtnsomiok 9. Productivity is increased by combining, rearranging, or eliminating ○ _ _ _ _ _ _ _ _ _ _.

greatpine 10. ○ _ _ _ _ _ _ _ _ a single motion helps speed work.

danshmars 11. Motion economy is often achieved by using ○ _ _ _ _ and ○ _ _ _ more efficiently.

lapn 12. _ _ _ ○ ahead, think through all the steps before beginning.

sepupils 13. Assemble all _ _ _ _ _ _ ○ _ before beginning work.

stool 14. Select the best _ _ ○ _ _ for the job.

tosurpe 15. Maintain good _ _ ○ _ _ _ _.

rkwo 16. Clean up as you _ _ ○ _.

Work simplification tip: _ _ _ _ _ _ _ _ _ _ _ _ _ _, _ _ _ _ _ _ _ _ _ _ _ _.

ACTIVITY 13-20

DIRECTIONS: Complete the following exercises by writing your answers in the space provided.

1. Food portioning may be defined as ______________________________

____.

2. Food portioning contributes to the food service establishment through

____________________ and ______________________________________.

3. Figure the cost per serving portion for the following items.

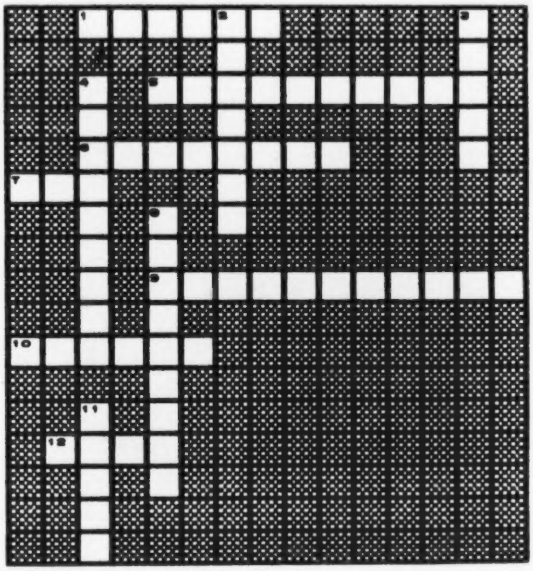
Item	Size	Cost of Item	Serving Size	Cost of Serving
a. Lima beans, frozen	5 lbs.	$3.50	4 oz.	
b. Peas, frozen	5 lbs.	$1.60	3 1/2 oz.	
c. Onions and peas, frozen	3 lb.	.34 /lb.	3 1/2 oz.	
d. Green beans, frozen	5 lb.	.34 /lb.	3 oz.	
corn, frozen	5.lb.	.31 /lb.	3 oz.	

4. Figure the approximate number of serving portions for the following items.

Item	Size	Size of Portion	Number of Portions
a. Orange juice	1 gallon	5 oz.	
b. Strip sirloin of beef (3 lbs. and 12 oz. lost through boning and trimming)	17 lbs.	10 oz.	
c. Ground beef	50 lbs.	6 oz.	
d. Halibut (7 lbs. and 11 ozs. lost through boning, skinning and trimming)	70 lb.	6 oz.	

ACTIVITY 13-21 **DIRECTIONS**: To review procedures for portioning foods, complete the following crossword puzzle.

PORTIONING FOODS



ACROSS CLUES

1. A large amount of food on a small plate may appear ___ ___ ___ ___ ___ ___.

5. A small amount of food or a large plate appears ___ ___ ___ ___ ___ ___ ___ ___ ___ ___.

6. ___ ___ ___ ___ ___ ___ ___ ___ should be exact size specified.

7. Avoid placing foods such as butter or jello near ___ ___ ___ foods.

9. Indifference toward ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ can cost an employee the job.

10. ___ ___ ___ ___ ___ ___ food is often the result of serving less food than amount specified.

12. Serving ___ ___ ___ ___ food than amount specified can cost the food service facility many dollars.

DOWN CLUES

2. When ___ ___ ___ ___ ___ ___ ___ food, use the correct size dish or plate.

3. Do not place ___ ___ ___ ___ ___ where it will soak up juice from vegetables.

4. Serving less food than amount specified can result in dissatisfied ___ ___ ___ ___ ___ ___ ___ ___ ___.

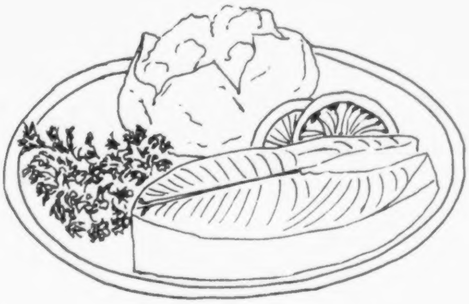
8. Failure to use the size dipper or ladle specified for the food can result in ___ ___ ___ ___ ___ ___-___ ___ ___ profits.

11. Do not let ___ ___ ___ ___ ___ run together on the plate.

ACTIVITY 13-22

DIRECTIONS: Select an appropriate garnish for the foods listed. In appropriate columns, write a description of the garnish and the reason for using the garnish. Justify use of the garnish by using the guidelines studied in the text.

Foods	Selected Garnish	Justification for Garnish Selected
a. Platter of fish		
b. Fruit salad		
c. Vegetable salad		
d. Chicken salad sandwich		
e. Cream soup		
f. Roast beef		
g. Meat salad		



14

Chapter Fourteen Beverages

COMPETENCY TO DEVELOP

- Prepare a variety of non-alcoholic beverages.

OBJECTIVES TO ACHIEVE

- Identify types and forms of beverages frequently prepared in food service.
- Describe menu uses of various beverages.
- Identify quality standards for specific beverages.
- Describe procedures for holding and storing beverages.
- Outline steps in preparing various beverages.
- Describe procedures for serving and garnishing various beverages.

Most food service establishments serve a variety of beverages. Some of these beverages require specific procedures for preparation, while others require no preparation at all. Regardless of the type and amount of preparation required, all beverages have quality standards that should be considered. For example, milk should be served cold rather than hot, and coffee should be served hot rather than cold. In order to maintain the quality of beverages and the reputation of the food service establishment, food service workers must be aware of the procedures for preparing, serving, and holding various beverages.

ACTIVITY 14-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

activated charcoal
beverage station
fill line
homogenized milk
skim milk
steeped
whole milk

Additional terms

ACTIVITY 14-2

DIRECTIONS: Answer the following questions in the space provided to review the menu uses, quality standards, and holding and storing procedures for various beverages.

1. What are the two most frequently prepared beverages in food service?
2. What is a beverage station?
3. Which beverage might be served before a meal?
4. Which beverages are frequently served after a meal?
5. Which beverages are often served alone or with a snack?
6. Describe the correct procedure for holding and storing coffee:

ACTIVITY 14-3

DIRECTIONS: To identify beverages frequently prepared in food service, answer the items below the word search puzzle. Use the word search to help you find the answers to the questions. The words in the puzzle may be spelled diagonally, horizontally, or vertically.

WORD SEARCH–BEVERAGES

```
V H H S G Q O P I E Y F L F B
W E Y D A N M J A S L A P Z R
F M G O K Z Z M V E E X B C T
F C C E G P T K J A L C N P S
S O F K T M E R J D Q E L I Q
C F M A E A A S H C E H S Z N
B R N W V Y B C Z F Y Z I P P
A U Q O Z S Z L F Q O F K G Z
W I I M G Z O O E V S B T T S
R T E B P Z C F G J U R B T M
P J Q L P D Q J T K U K B V K
S U W S Y S C O B D V I S F U
H I D T F B F F Q P R W C Z R
A C A B H F W Y D G U I P E M
K E L T Q I K T J H J N N T S
E S D I C E D W A T E R C K C
S W V H R S V N Y N C B A H S
```

1. Americans drink more ______________ than any other beverage.

2. Combinations of fruit juices are called ______________.

3. ____________________________ are drawn from an automatic dispenser containing flavored syrup and carbonated water.

4. Hot ______________ is especially popular in winter months.

5. _________________ ___________ are served as breakfast beverages.

6. The first beverage to be served to a customer in a seated service restaurant is ____________________________.

7. During the summer months, ______________ is a popular and well liked drink.

8. ______________ is a favorite fast food beverage that is prepared in an automatic dispenser.

ACTIVITY 14-4 **DIRECTIONS**: In the space provided, summarize the steps or procedures in the preparation of the following beverages.

1. Iced water ______________________________

2. Brewed coffee ______________________________

3. Instant coffee ______________________________

4. Hot tea ______________________________

5. Iced tea ______________________________

6. Hot cocoa ______________________________

7. Milk shake ______________________________

8. Fruit punch ______________________________

643

ACTIVITY 14-5

DIRECTIONS: Place the letter of each type of beverage in the blank to the left of its procedure for serving or garnishing. Some of the letters will be used more than once. Note: There may be more than one letter for each answer.

PROCEDURE FOR SERVING AND GARNISHING

_____ 1. Often served with lemon, sugar, and milk.

_____ 2. Usually served with a straw and a long spoon.

_____ 3. Sometimes garnished with a twist of lemon or lime or a sprig of mint.

_____ 4. Usually served with cream and sugar.

_____ 5. Usually served with lemon and sugar.

_____ 6. Often served in a pre-heated cup.

_____ 7. Sometimes garnished with celery sticks.

_____ 8. Usually served with a drinking straw.

_____ 9. Sometimes garnished with whipped cream, marshmallows, shaved chocolate, or cinnamon sticks.

_____ 10. Usually served in its original container.

_____ 11. Sometimes garnished with mint leaves, lemon or lime slices or wedges, or strawberries.

TYPE OF BEVERAGE

A. Carbonated beverages

B. Coffee

C. Fruit juices

D. Hot chocolate and cocoa

E. Hot tea

F. Iced tea

G. Iced water

H. Milk

I. Milk shakes

J. Tomato juice

15

Chapter Fifteen
Cold Sandwiches

COMPETENCY TO DEVELOP

- Prepare hot and cold sandwiches.

OBJECTIVES TO ACHIEVE

- Identify types of sandwiches.
- Identify ingredients used in making sandwiches.
- Describe methods for preparing sandwiches.
- Design ways to cut and arrange sandwiches.
- Describe ways to garnish and serve sandwiches.
- Outline procedures for holding and storing sandwiches.

The sandwich is one of the most popular menu items in America. It is sold at sandwich counters, in vending machines, in fast food establishments, and in seated-service restaurants. Sandwiches are especially popular at lunch, but also are eaten for dinner and snacks. The popularity of sandwiches is promoted by the fact that they are nutritious, reasonable in price, and quick-food items. Following acceptable standards for the preparation and serving of sandwiches contributes to a higher quality product.

ACTIVITY 15-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

canapes ______________________________

croissants ______________________________

garnish ______________________________

production line ______________________________

rye ______________________________

salmonella contamination ______________________________

stale ______________________________

tea sandwiches ______________________________

whole wheat ______________________________

yeast bread ______________________________

Additional terms

____

____

____

ACTIVITY 15-2

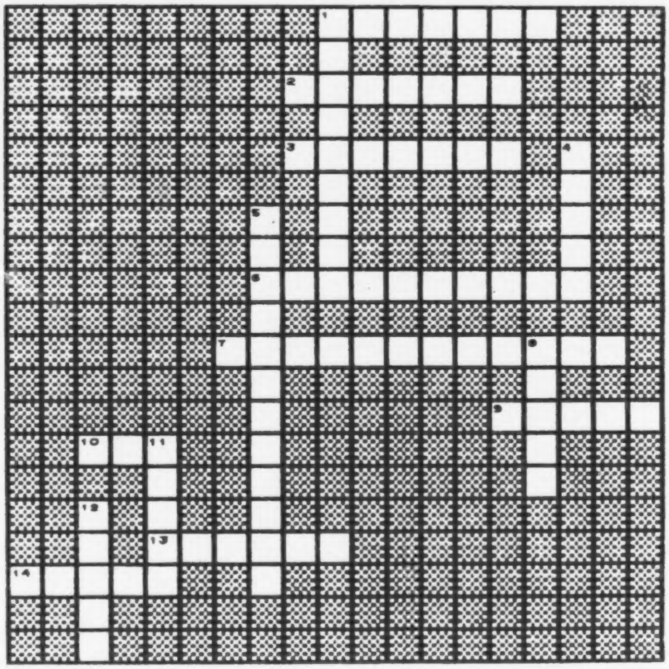
DIRECTIONS: Place the letter of each type of sandwich in the blank to the left of its description. Use each letter only once.

	DESCRIPTION	**TYPE OF SANDWICH**
_____	1. Sandwich made with two slices of bread.	A. Canape
_____	2. Very small open-faced sandwich.	B. Club or decker
_____	3. Sandwich made with three slices of bread.	C. Open-faced
_____	4. Sandwich made with a special bread.	D. Regular
_____	5. Sandwich made with one slice of bread.	E. Specialty
_____	6. Small regular sandwich.	F. Tea

ACTIVITY 15-3

DIRECTIONS: To review the ingredients used in making sandwiches, complete the following crossword puzzle.

SANDWICH INGREDIENTS



ACROSS CLUES

1. A spread helps seal the surface of bread to prevent the filling from __ __ __ __-__ __ __ into the bread.
2. Sandwich bread should have a firm, __ __ __ __ __ __ __ __ texture.
3. The sandwich __ __ __ __ __ __ __ __ is the ingredient or ingredients placed between the slices of bread.
6. The most common spreads are butter, margarine, and __ __ __ __ __-__ __ __ __ __.
7. Bread that has been __ __ __ __ __ __-__ __ __ __ __ __ is easier to spread.
9. Quick breads popular for sandwiches include Boston brown bread, nut bread, and __ __ __ __ __ __ bread.
10. __ __ __ fillings include thin slices of meat, poultry, fish, or cheese.
13. A __ __ __ __ __ __ __ is a thin, coating used on one side of the sandwich bread.
14. __ __ __ __ __ fillings are made from finely chopped meat, chicken, turkey, fish, or cheese.

DOWN CLUES

1. Crusty yeast rolls or special breads such as croissants are often used for __ __ __-__ __ __ __ __ __ __ sandwiches.
4. Bread for sandwiches must be neither too fresh, nor too __ __ __ __ __.
5. Yeast breads popular for sandwiches include whole wheat, rye and __ __ __-__ __ __ __ __ __ __ __ __.
8. Moist fillings should not stand at room temperature for more than __ __ __ __ __ hours.
11. Bread for sandwiches may be either __ __ __ __ __ or quick bread.
12. __ __ __ __ __ breads are especially popular for sweet sandwiches.

ACTIVITY 15-4

DIRECTIONS: Answer the following questions related to sandwich preparation. Write your answers in the blanks provided.

1. What are the two main steps in sandwich preparation?

2. How long should bread be refrigerated before using?

3. List four tools or utensils needed at a sandwich preparation center:

4. Explain the difference in work flow for a left- and right-handed worker.

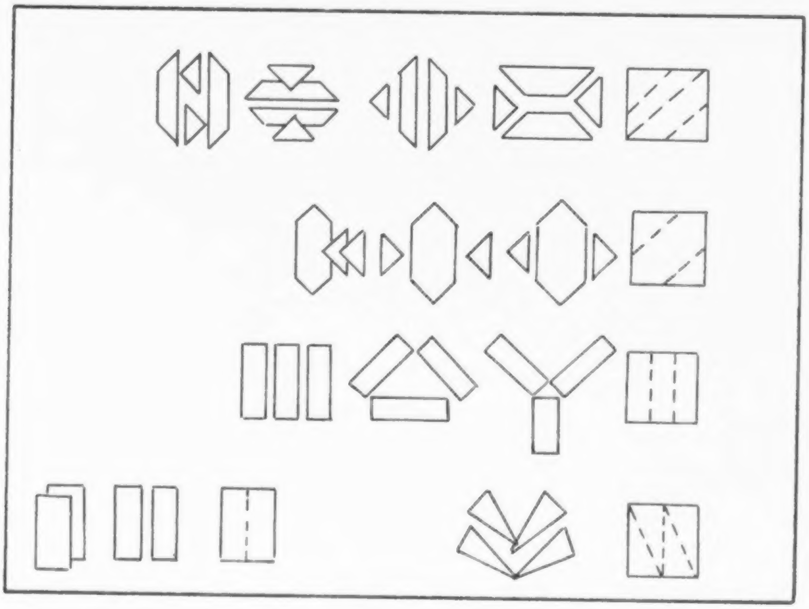
5. How does forming a production line for assembling sandwich parts differ from having one worker doing the job?

6. List the ten steps that should be followed when preparing a sandwich with a moist filling. Assuming that you are a right-handed person, determine whether the right hand or the left hand or both should be used for each step.

	STEPS	HAND(S)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

ACTIVITY 15-5

DIRECTIONS: The illustration below shows several ways to cut sandwiches and arrange them in an eye-appealing manner. Use your imagination to create some new and interesting ways to cut and arrange sandwiches. Draw your designs in the space provided below the illustrations.



ACTIVITY 15-6

DIRECTIONS: Connie is employed at a food service establishment. Her supervisor has assigned her to the sandwich-making area. Let's follow her through her first day's activities and see if you can answer her questions about preparing, garnishing, serving, and storing cold sandwiches. Write your answers in the blanks provided.

1. Connie's supervisor told her that it is very important that she use the amount of spread and filling specified. If more than the specified amount is used, there will not be enough ingredients for the required number of sandwiches. If not enough is used, the customer will be dissatisfied. Suppose Connie used 3 1/2 T. of spread per sandwich instead of the 2 1/3 T. specified. Instead of being able to make 102 sandwiches per gallon of filling, she would be able to make only 73. If the sandwiches sold for $1.50 each, how much would the business lose?

   $____________________.

2. After the sandwiches were made, Connie had the following questions:

   a. What can I use to garnish the open-faced sandwiches?

   ____

   b. What can I use to garnish the regular sandwiches?

   ____

   c. How should I arrange the garnishes for the regular sandwiches?

   ____

   d. What can I use to garnish the sweet sandwiches?

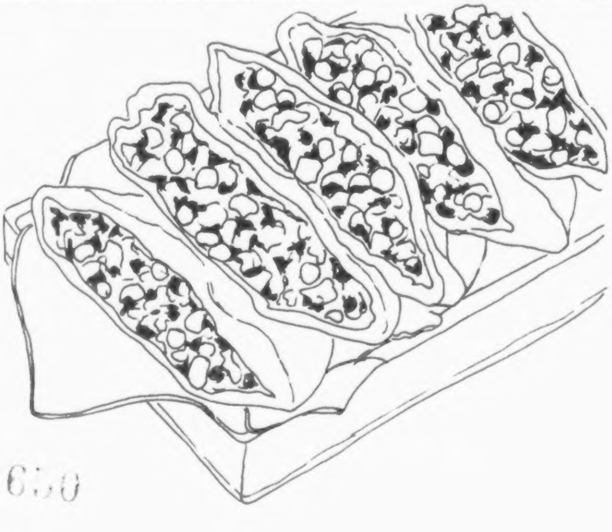
   ____

   e. What vegetables or other food could I serve with the sandwiches?

   ____

   f. What should I use to cover unwrapped sandwiches that need to be refrigerated for storing?

   ____



16

Chapter Sixteen
Salads

COMPETENCY TO DEVELOP

- Prepare salads and salad dressings.

OBJECTIVES TO ACHIEVE

- Identify types of salads.
- Describe menu uses of salads.
- Describe the basic parts of a salad.
- Name the basic types of salad dressings.
- Describe the steps in preparing salad dressings.
- Identify various salad ingredients.
- Prepare and store salad ingredients.
- Describe procedures for preparing tossed, molded, and arranged salads.
- Describe procedures for serving and garnishing salads.
- Summarize procedures for holding and serving salads and salad dressings.

A well prepared salad adds variety, crispness, color, and flavor to a meal. Many factors affect the appeal of a salad. Some of these factors include the use of high quality ingredients, attractive and appropriate garnishes and toppings, and proper procedures for preparing and storing. Food service workers should consider these factors in order to increase customer appeal for salads.

ACTIVITY 16-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

binder ____________________

emulsion ____________________

enhancers ____________________

freeze-dried ____________________

marinade ____________________

permanent emulsions ____________________

rancid ____________________

rehydrate ____________________

temporary emulsion ____________________

toppings ____________________

weepings ____________________

Additional terms

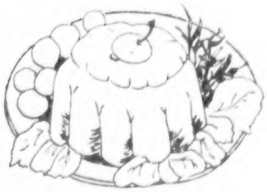
____

____

____

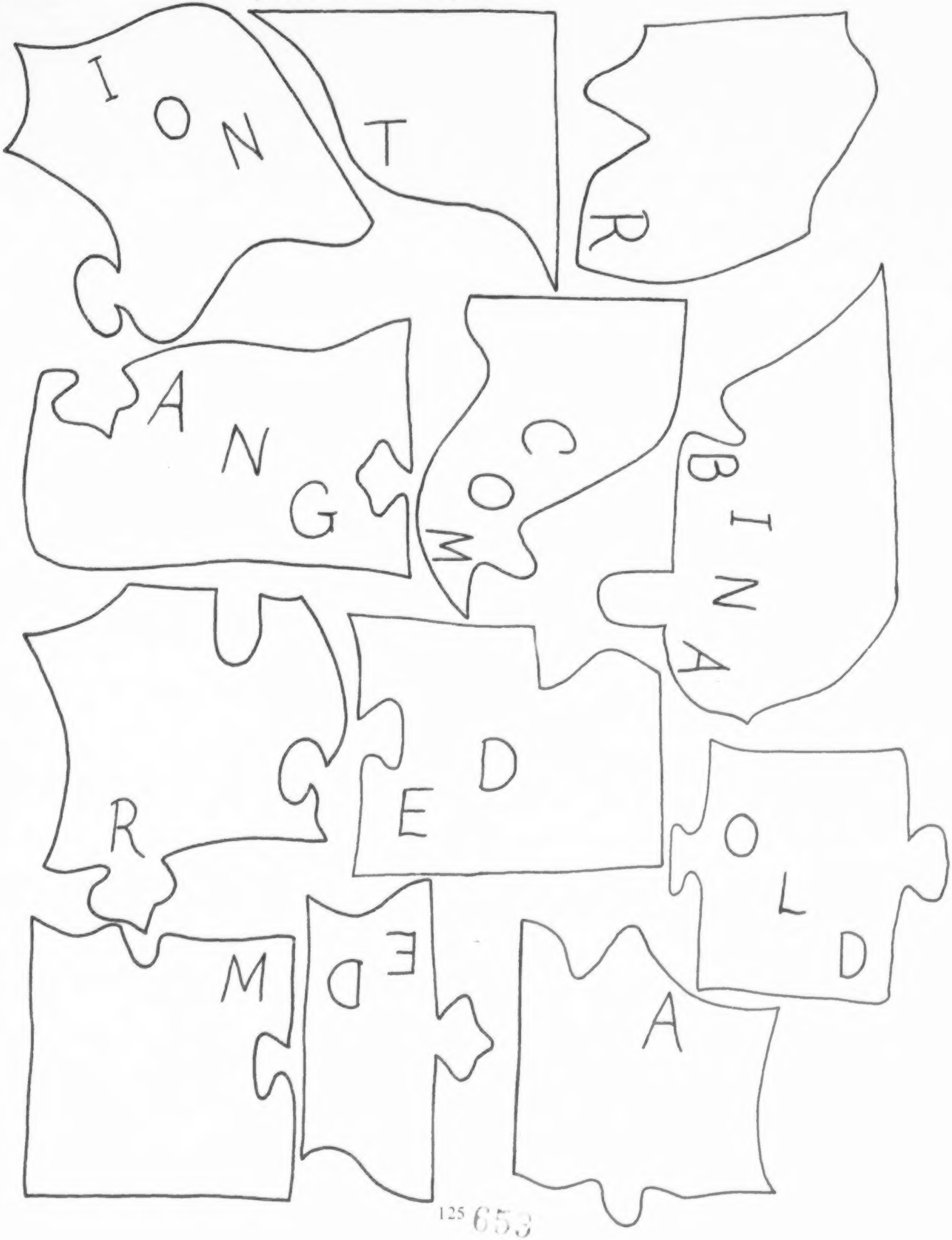
____

____



ACTIVITY 16-2

DIRECTIONS: Put the puzzle pieces together to reveal the three main types of salads. Copy the following puzzle pieces on another sheet of paper. Then cut each piece out and work the puzzle in the space provided on the next page.


I O N
T
R
A N G
C O M
B I N A
R
E D
O L D
M
E D
A

Now that you have completed the puzzle, write the three types of salads in the blanks below. Then list at least one example of each underneath each type.

1. ____________________ 2. ____________________ 3. ____________________

____________________ ____________________ ____________________

ACTIVITY 16-3

DIRECTIONS: Four salad menu items are listed on the top row of the chart below. Each of the next seven rows begins with a different letter of the alphabet. See if you can list one example of each type of menu item which begins with the same alphabet letter at the left of each row. Two examples have been provided for you. Note: See if you can think of several examples in addition to those listed in *Food Production, Management, and Service*.

	Appetizer	Entree	Accompaniment	Dessert
C			Cole slaw	
F				
M				
O				
P				
S		Spinach salad with chopped egg and bacon		
T				

ACTIVITY 16-4

DIRECTIONS: Unscramble the three words below to reveal the three basic parts of a salad. Write the unscrambled words on the broken lines. Then write a description of the basic salad part on the solid lines provided.

Scrambled word	Part of salad	Description
1. sbae	_ _ _ _	____________________ ____________________ ____________________
2. ybdo	_ _ _ _	____________________ ____________________ ____________________
3. sgdinser	_ _ _ _ _ _ _ _	____________________ ____________________ ____________________

ACTIVITY 16-5

DIRECTIONS: Complete the following activity to identify the basic types of salad dressings and to review the preparation procedures and uses of each. Place the letter of each salad dressing in the blank to the left of its correct description. Each letter will be used more than once.

Description

_____ 1. Have an oil base.

_____ 2. Used with meat, fish, poultry, cooked vegetables, and some fruit salads.

_____ 3. Thickened with egg, cornstarch, or flour instead of an oil emulsion.

_____ 4. Used in potato salads, coleslaw, and many meat, poultry, and fish salads.

_____ 5. Made with a permanent emulsion of eggs, oil, vinegar, and seasonings.

_____ 6. May be thin or thick depending on whether or not a binder is used.

_____ 7. May be mixed with chopped onion, eggs, cheese, and chopped pickle.

_____ 8. Used on greens, vegetables, and fruits.

_____ 9. Are thick and tart.

_____ 10. Must be spooned rather than poured.

Salad Dressings

A. Cooked

B. French

C. Mayonnaise

ACTIVITY 16-6

DIRECTIONS: List nine salad ingredients in the first column of the chart below. In the middle column, summarize the preparation procedure for each ingredient listed. Then summarize the storage procedure for each ingredient in the third column.

Salad Ingredient	Preparation Procedure	Storage Procedure
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

ACTIVITY 16-7

DIRECTIONS: To review the procedures for preparing, serving, garnishing, and storing salads, respond to the questions in the following case situations.

Case Situation #1

Anita is a food service worker with the responsibility of preparing tossed salads for customers. She desperately needs your advice on how to avoid wilting the ingredients, prevent bruising, and preserve crispness. What suggestions can you give her?

Anita assembles the salads by herself. Her employer has asked her to use some orderly or step-by-step procedure to increase production. What procedure would you advise?

Case Situation #2

Paul is having trouble thinking of a suitable garnish and an appropriate topping to serve with the tossed salad he has just prepared. What examples of garnishes and toppings can you think of?

Case Situation #3

Art is unsure of the procedure he should follow to store salad greens and salad dressing. He is considering putting the salad dressing in the freezer to save space in the refrigerator. Should he do this? He is also wondering what to do with the leftover chicken salad. What storage procedures would you encourage Art to follow?

17

Chapter Seventeen
Appetizers

COMPETENCY TO DEVELOP

- Prepare appetizers and garnishes.

OBJECTIVES TO ACHIEVE

- Name the basic types of appetizers.
- Describe procedures for serving appetizers.
- Describe procedures for preparing appetizers.
- Describe procedures for holding and storing appetizers.

Appetizers are small amounts of food used to stimulate the appetite. Appetizers which are light, tasty, colorful, and attractive are more appealing to customers and therefore, result in increased sales. The attractiveness of appetizers can be enhanced with the use of garnishes. Garnishes are the finishing touches placed on or around food. To please customers of their food service establishment, food service workers should be knowledgeable of various types of appetizers and appropriate garnishes.

ACTIVITY 17-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

appetizer ____________________

aspic ____________________

dips ____________________

hors d'oeuvres ____________________

relishes ____________________

spread ____________________

Additional terms

____

____

____

____

____

ACTIVITY 17-2

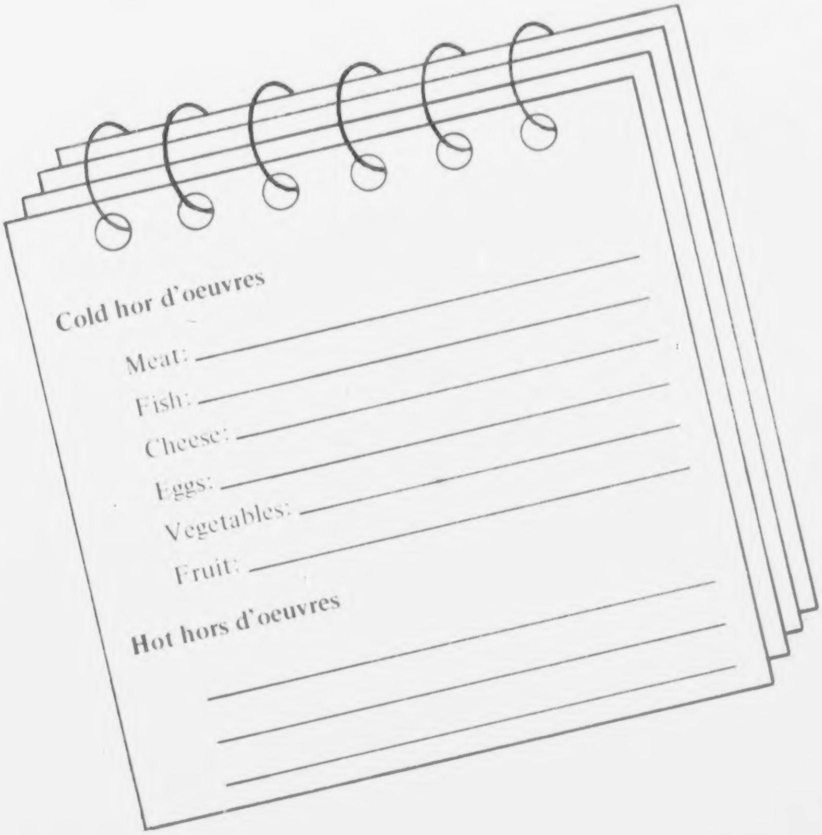
DIRECTIONS: Unscramble the following words to reveal the basic types of appetizers. Then unscramble the circled letters to complete the mystery sentence.

1. rsehsile _ _ _ _ _ _ _ _
2. kscicaotl ○ _ _ _ _ _ _ _ _
3. usops _ ○ _ _ _
4. aspcaen _ _ _ _ _ ○ _
5. dpsernipadsasd _ _ ○ _ _ _ _ _ _ _ _ _ _ _
6. daslas _ _ _ _ _ ○
7. sdvoheuroers _ _ _ _ _'_ _ ○ _ _ _ _

Appetizers are served before the main _ _ _ _ _ _ of a meal.

ACTIVITY 17-3

DIRECTIONS: Assume that you are a food service worker who has been given the responsibility of preparing hors d'oeuvres for a dinner party. Before preparing the hors d'oeuvres, you must determine the type of hors d'oeuvres you are going to make. Use the chart below to help you plan by listing an example of each type of cold hors d' oeuvre and three examples of hot hors d'oeuvres.



Cold hor d'oeuvres

Meat: ______

Fish: ______

Cheese: ______

Eggs: ______

Vegetables: ______

Fruit: ______

Hot hors d'oeuvres

______

______

______

ACTIVITY 17-4

DIRECTIONS: Fill in the blanks with the word or words that best complete the sentence. Refer to the picture on the next page illustrating canapes on a serving tray for clues to the missing words. The words are listed below the illustration.

1. Canapes are small, open-faced ________________.

2. The three parts of canapes consist of the ________________, the ________________, and the ________________.

3. The ________________ of a canape may be small pieces of bread, toast, crackers, wafers, chips, or pastries cut into various shapes.

4. ________________ - ________________ bread is best for spreading.

5. The spread for canapes is usually based on ________________ or ________________.

6. The spread adds ________________ to the canape.

7. An edible garnish is often added to the top of the canape to make it more ________________.

8. The garnish should add ________________, ________________, and ________________.

9. The spread should be applied on the ________________ side of the bread.

10. The spread helps keep the base of the canape from becoming ________________.

11. A canape may be covered with a glaze called an ________________.

12. Aspic is a ________________ flavored with boullion or tomato.

13. Eggs, cheese, fish, meat, and poultry are the primary ________________ in canapes.

14. Variations of canapes include ________________, ________________, and ________________ sandwiches.

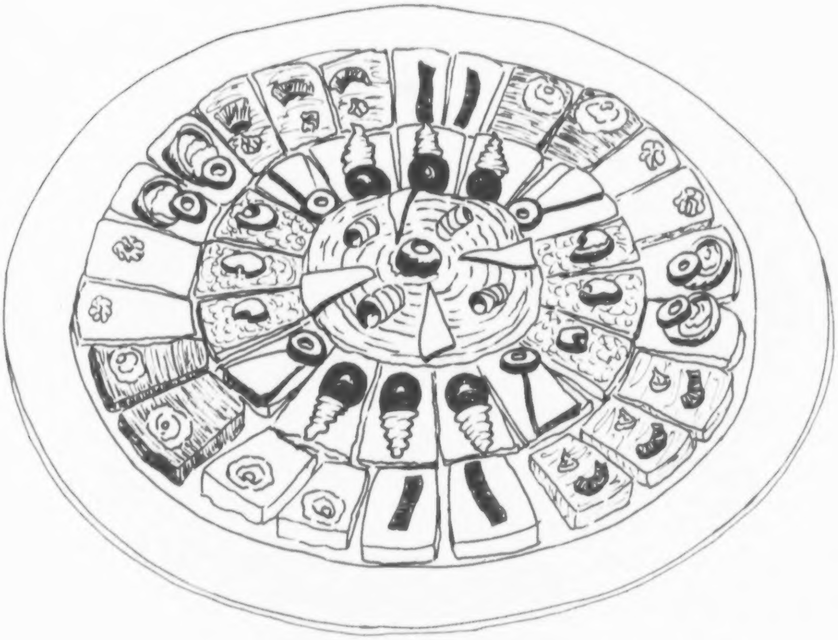
15. The spread of a canape helps hold the ________________ in place as well as keep the ________________ from drying out.

16. ________________ sandwiches are made with sweet breads such as datenut, banana, or orange-nut.

17. Herbs such as ________________ or ________________ and spices such as ________________ may be used to garnish canapes.

18. A rolled sandwich consists of a thin slice of ________________ bread, spread with filling, then rolled, chilled and sliced.

19. A ________________ sandwich is made by alternating crustless slices of whole wheat and white bread with filling, then chilling before slicing.



aspic
attractive
base
bread
butter
color
crustless
day-old
flavor
garnish
ingredients
jelly

margarine
mint
paprika
parsley
ribbon
rolled
sandwiches
shape
soggy
spread
tea
untoasted

ACTIVITY 17-5

DIRECTIONS: Place the letter of each appetizer in the blank to the left of its description. Some of the letters are used more than once.

DESCRIPTONS

_____ 1. Food mixtures similar to sandwich fillings.
_____ 2. Soft spreads into which chips, bread sticks, vegetables, and fruit are dipped.
_____ 3. Served in stemmed glasses and garnished with fruit.
_____ 4. Consist of crisp vegetables, pickles or olives.
_____ 5. Served in a dish surrounded by crisp crackers, bread sticks, or tiny biscuit halves.
_____ 6. Include either alcoholic or non-alcoholic beverages.
_____ 7. Consist of tart fruit, salad greens, or seafoods.
_____ 8. Consist of ingredients such as cheese, avocadoes, clams, anchovies, or shrimp blended with sour cream or softened cream cheese.
_____ 9. Served in stemmed glasses and garnished with a sprig of mint, a celery stick, or an olive.
_____ 10. Include broth, bouillon, consomme, or jellied soups.
_____ 11. Served with lemon wedges or slices and a spicy tomato sauce.

TYPES OF APPETIZERS

A. Beverage cocktails
B. Dips
C. Fruit cocktails
D. Relishes
E. Salads
F. Seafood cocktails
G. Soups
H. Spreads

ACTIVITY 17-6

DIRECTIONS: Assume that you are a food service manager training a new employee named Emmanuel to prepare, hold, and store appetizers. Emmanuel has very little knowledge about appetizers; therefore you must provide very detailed and explicit instructions for him. Write your instructions in the space provided.

1. What are the five guidelines that you would tell Emmanuel to follow when preparing appetizers in an assembly line?

____
____
____
____
____

2. What sanitation measures would you encourage Emmanuel to practice while preparing appetizers?

____
____
____

3. What suggestions would you give Emmanuel for holding and storing appetizers?

____
____
____

18

Chapter Eighteen
Soups and Sauces

COMPETENCY TO DEVELOP

- Prepare soups, sauces, and gravies.

OBJECTIVES TO ACHIEVE

- Describe procedures for preparing and using different stocks.
- Identify the types of soups and their characteristics.
- Describe procedures for preparing soups.
- Describe menu uses of soups.
- Describe procedures for garnishing and serving soups.
- Identify basic sauces and their uses.
- Describe procedures for preparing basic sauces.
- Describe procedures for holding and storing soups and sauces.

Many food service establishments serve soup either as an appetizer or as a meal in itself. Soups have various preparation, garnishing, and serving procedures which when practiced, result in an appealing menu item. The flavor of meats, vegetables, and desserts may be enhanced by the addition of a carefully prepared gravy or sauce. Food service workers should have knowledge of the preparation and serving procedures for soups, sauces, and gravies.

ACTIVITY 18-1

DIRECTIONS. Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

au jus __________

espanol __________

foundation sauces __________

hearty __________

liaison __________

meuniere __________

pan gravy __________

raft __________

stocks __________

white stock __________

Additional terms

ACTIVITY 18-2

DIRECTIONS: Answer the following questions in the spaces provided.

1. List the steps in preparing stocks.

2. Explain the procedure for clarifying stocks.

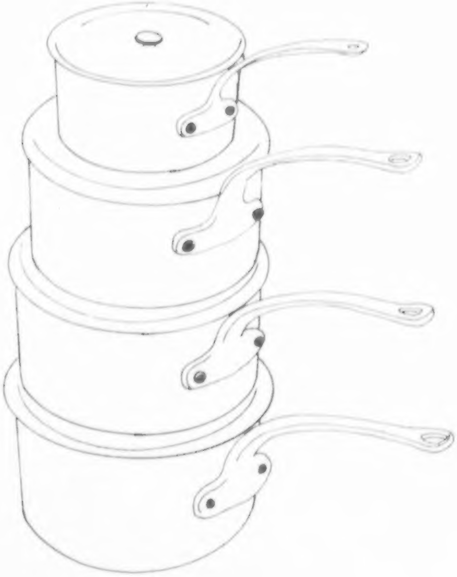
3. What are each of the following kinds of stocks made from?

White stock

Brown stock

Poultry stock

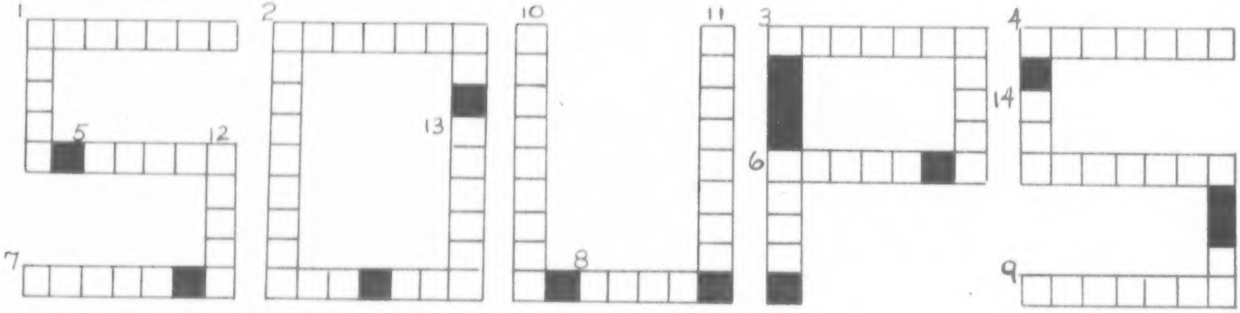
Fish stock



ACTIVITY 18-3

DIRECTIONS: To review the characteristics of and the preparation procedures for various soups, complete the following puzzle. Some items will continue in another direction to complete the word.

VARIOUS SOUPS



ACROSS

1. A cold, smooth, beet soup with sour cream which was first introduced in Russia.
2. A clear broth made from bouillon and categorized as a thin soup.
3. A cream soup made from potatoes, onions, leeks, chicken stock, and cream and categorized as a cold soup.
4. A specialty soup which originated in France.
5. A cold, sweet soup from Norway.
6. A thick soup made from a milk base which is combined with chicken or beef stock.
7. A thick, hearty soup made from ingredients which are forced through a food mill or sieve.
8. A mixture of equal parts of fat and flour used to thicken soups.
9. Small, toasted cubes of bread often served with soup.

DOWN

1. A thin soup which has not been clarified.
2. A type of soup frequently used in food service operations to save time and energy.
6. A type of soup which is especially popular in the summer.
10. A soup made with diced or cubed vegetables and a stock base.
11. A cold soup from Spain.
12. A type of soup prepared from a stock or milk base thickened by the addition of starch or starchy foods.
13. A thin soup which is made from beef, chicken, or lamb and is the French word for broth.
14. A hearty soup made from a stock, milk, or combination base.

ACTIVITY 18-4

DIRECTIONS: To review the menu uses of soups and the procedures for garnishing and serving soups, complete the following activity. Circle the letter T if the statement is true. Circle the letter F if the statement is false.

T F 1. Thin soups are hearty soups meant to be served as meals.

T F 2. Cold soups should be served in prechilled dishes which may be surrounded by cracked ice.

T F 3. Garnishes such as sour cream and lemon, lime, and cucumber slices are more appropriate for hot soups than cold soups.

T F 4. When holding, a soup should be kept at a temperature between 40°F and 140°F.

T F 5. Garnishes such as chopped parsley, chives, or chervil are suitable for vegetable soups.

T F 6. Some soups should be served lukewarm.

T F 7. A puree is suitable for the main dish of a meal.

T F 8. Specialty soups are meant to be served as appetizers.

T F 9. Crisp crackers, thin brown toast, bread, pastry, bread sticks, and croutons are appropriate accompaniments served with soups.

T F 10. Parsley, paprika, onion rings, and bacon bits are appropriate and attractive soup garnishes.

T F 11. Soup can be stored, refrigerated for several days.

ACTIVITY 18-5

DIRECTIONS: Complete this word scramble to identify the ingredients and preparation procedures for basic sauces.

1. uesca — — — — —	A richly flavored stock or liquid used to complement another food.

HOT SAUCES

2. geucasge — — — — — — — —	An emulsion consisting of butter, egg yolks, and a liquid.
3. sotmetoauca — — — — — — — — — — —	Has tomato juice, tomato puree or paste, or fresh tomatoes as its base.
4. suebowarnc — — — — — — — — — —	Made from a well-browned roux and brown stock from beef.
5. mucaserace — — — — — — — — — —	Made from milk thickened with roux.
6. cuebtarsetu — — — — — — — — — — —	Made with cold butter or browned butter.
7. stawcheiue — — — — — — — — — —	Made with white stock from veal, chicken, or fish thickened with roux.
8. vsgeira — — — — — — —	Meat-flavored sauces made from the drippings of roasted meat.

COLD SAUCES

9. surae-wtosueeess — — — — — - — — — — — — — — — —	Made from a base of fruit, fruit juices, or vinegar.
10. ostbedmoatsueacs-a — — — — — — - — — — — — — — — — — —	Include seafood cocktail sauce and barbecue sauce.
11. bmyanecoinasueassdes-a — — — — — — — — — — - — — — — — — — — — — —	Include tartar sauce, dill sauce, and mustard sauce.

SWEET SAUCES

12.	ysrpursgasu ___________	Made by dissolving sugar and flavoring in water or milk and boiling until the desired thickness is reached.
13.	dsuaherca _________	Made from butter, confectioner's sugar, eggs, vanilla, and flavoring.
14.	ctduesuasrase _____________	Sweetened mixtures of milk and eggs.
15.	mpwhadceripe ____________	Easily prepared sauce usually sweetened with powdered sugar.
16.	msfyeasoacu ___________	Rich, uncooked sauces made with beaten egg whites, whipped cream, or both.

ACTIVITY 18-6

DIRECTIONS: Fill in the blanks with the word or words that best complete the sentences related to the uses of basic sauces and to the holding and storing procedures for sauces.

1. Brown sauce and its variations are usually served with __________.
2. __________ sauces are served over vegetables, seafood, and hot bread.
3. Egg sauces are served with eggs, __________, and vegetables.
4. Pan __________ are served with meats and vegetables.
5. A __________ sauce is used as a topping for plum pudding, fruitcake, mince pie, gingerbread, or steamed pudding.
6. __________ based sauces are served with meat and seafood.
7. Desserts and some meats are served with a __________ sauce.
8. ______ sauces should be served immediately after preparation to prevent food poisoning.
9. __________ sauces are used with pasta, vegetables, chicken, fish, and eggs.
10. Fruit __________ are used as garnishes for meat and poultry dishes.
11. __________ sauce may be served on beef, pork, veal, lamb, eggs, fish, poultry, or vegetables.
12. Mayonnaise-based sauces are served with appetizers, hors d' oeuvres, dips and __________.
13. __________ spoils very quickly and must be refrigerated except when being served.

19

Chapter Nineteen
Meat, Poultry, and Fish

COMPETENCY TO DEVELOP

- Prepare meats, seafoods, and poultry.

OBJECTIVES TO ACHIEVE

- Define the term entree.
- Identify the types and cuts of meat, poultry, and fish available.
- Identify the forms of meat, poultry, and fish available.
- Describe factors to consider when selecting meat, poultry, and fish.
- Describe procedures for handling and storing meat, poultry, and fish.
- Identify menu uses of meat, poultry, and fish.
- Name convenience meat, poultry, and fish products available.
- Summarize principles of cookery for meat, poultry, and fish.
- Outline methods for cooking meat, poultry, and fish.

Meat, poultry, and fish are extremely popular in American food service establishments. Each is usually served as the main course of a meal, but is sometimes served as an appetizer. Food service workers can be assets to their establishment if they utilize the proper procedures for preparing meat, poultry, and fish.

ACTIVITY 19-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

aging ____________________

carcass ____________________

dry heat ____________________

entree ____________________

forequarter ____________________

foresaddle ____________________

fricasseeing ____________________

grilled ____________________

hindquarter ____________________

hindsaddle ____________________

moist heat ____________________

muscle ____________________

papain ____________________

pounding ____________________

quality grades ____________________

quarters ____________________

retail cuts ____________________

scoring ____________________

side ____________________

trichinosis ____________________

wholesale cuts ____________________

Additonal terms

____

____

____

____

____

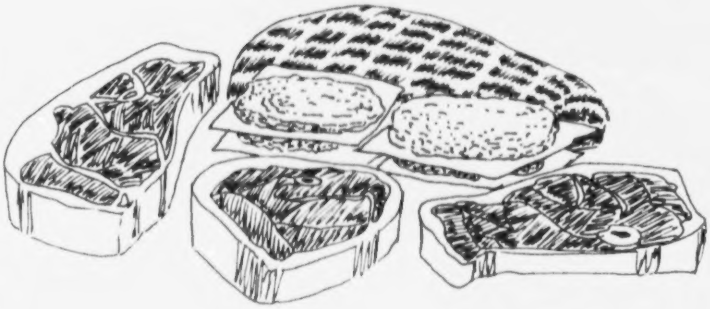
ACTIVITY 19-2 **DIRECTIONS**: Place the letter of each type or cut of meat in the blank to the left of its description.

DESCRIPTIONS

_____ 1. Meat from baby calves which have been milk-fed.
_____ 2. Small flecks of fat throughout the muscle.
_____ 3. Cuts of meat including the round, rump, flank, and chuck of beef.
_____ 4. Meat from beef, veal, pork or lamb sources.
_____ 5. Cuts of meat including the loin and ribs of beef, veal, lamb, and pork.
_____ 6. Meat from the flesh of young sheep.
_____ 7. Cuts of meat including the liver, kidney, heart, tongue, and brains.
_____ 8. Meat from fully grown steers.
_____ 9. Primary factor affecting the tenderness of meat.
_____10. Meat from the flesh of pigs or hogs.

TYPES AND CUTS OF MEAT

A. Beef
B. Bone
C. Connective tissue
D. Fat
E. Hindquarter
F. Lamb
G. Less tender cuts
H. Marbling
I. Muscle
J. Pork
K. Red meat
L. Tender cuts
M. Variety meats
N. Veal



ACTIVTY 19-3

DIRECTIONS: To review the forms and menu uses of meat and the procedures for selecting, handling, storing, and preparing meat, complete the following activity. Write your answer to each question in the space provided.

1. List and describe the four forms of meat:
   - ____________________
     ____
     ____
   - ____________________
     ____
     ____
   - ____________________
     ____
     ____
   - ____________________
     ____
     ____

2. List three factors which should be considered when selecting meats:
   ____
   ____
   ____

3. What are two signs of quality that can be looked for when selecting meat?
   ____
   ____

4. List and define the three things that quality grades are based on:
   - ____________________
     ____
     ____
   - ____________________
     ____
     ____
   - ____________________
     ____
     ____

5. The size and shape of the bone in a cut of meat aids in identifying its location. Beside each bone shape below, name its location and label the cut as tender or less tender.

- round ____________________
  ____
- long ____________________
  ____
- curved ____________________
  ____
- T-shaped ____________________
  ____

6. Describe the quality appearance for each of the following:

- beef ______________________________
  ____
- veal ______________________________
  ____
- pork ______________________________
  ____
- lamb ______________________________
  ____

7. Describe the proper handling and storing procedure for each of the following:

- fresh meat ______________________________
  ____
- prepackaged meat ______________________________
  ____
- cured and ready-to-eat meats ______________________________
  ____
- frozen meats ______________________________
  ____
- canned meat ______________________________
  ____

8. What meats are popular for the main course of a dinner?

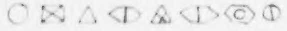
____

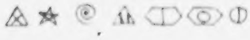
9. What foods can be combined with meat to create a main dish for lunch or supper?

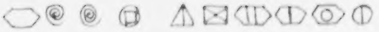
____

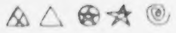
ACTIVITY 19-4

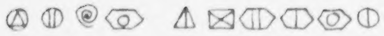
DIRECTIONS: Use the code at the bottom of the page to reveal the mystery words related to methods of cooking meat. Write each letter on the correct space under each symbol. In the blanks to the right of each answer, write a description of the cooking method.

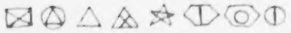
1. 

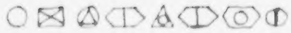
2. 

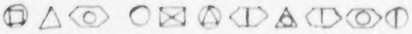
3. 

4. 

5. 

6. 

7. 

8. 

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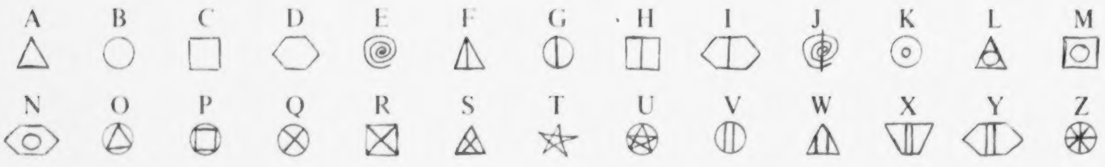
A
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V
W
X
Y
Z

ACTIVITY 19-5

DIRECTIONS: To identify the types of poultry, complete the following activity. Use the puzzle code below to help you identify the words that complete the sentences. Using the puzzle code is simple: the first two numbers above the first blank in item 1 are 3-4. Using the index finger of your right hand find 3 in the numbers on the top of the puzzle code; this is column 3: with the index finger of your left hand find 4 in the numbers to the left of the puzzle; this is row 4; draw a line with your fingers down from 3 and across from 4 until they meet. The letter where your two fingers meet is the one you put in the blank. In this case O. Can you find the letter for the second blank (4-3)? It's an L. Continue until you have completed the blanks in all 7 items.

Puzzle Code

	1	2	3	4	5	6	7
1	A	B	E	J	Q	Z	K
2	C	D	F	K	R	A	L
3	G	H	I	L	S	B	M
4	M	N	O	P	T	C	N
5	U	V	W	X	Y	D	O
6	E	F	G	H	I	J	P

3-4 4-3 2-2 3-1 5-2

1. ___ ___ ___ ___ ___ birds are less tender, but more flavorful,

5-5 3-4 1-5 2-4 3-6 3-1 5-2

than ___ ___ ___ ___ ___ ___ ___ birds.

3-2 5-2 5-5 3-1 5-2 5-3

2. ___ ___ ___ ___ ___ ___ are young birds of either sex weighing 2 1/2 to 3 1/2 pounds.

5-3 5-4 3-1 3-5 5-6 7-4 1-3 2-3 1-6 2-4 5-3

3. ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ are heavy, mature birds weighing 4 to 6 pounds.

2-1 5-2 7-5 5-6 4-3 3-1 5-2 5-3

4. ___ ___ ___ ___ ___ ___ ___ ___ are very young birds of either sex weighing 1 to 2 1/2 pounds.

3-2 1-1 5-4

5. Roasters are very meaty and have a layer of ___ ___ ___ beneath the skin.

1-2 6-2 4-4 3-4 7-4 5-3

6. ___ ___ ___ ___ ___ ___ are male chickens that have been desexed and weigh 4 to 7 pounds.

7-2 3-1 5-3 5-3

7. The meat of stewing hens is flavorful, but ___ ___ ___ ___

5-4 3-1 7-4 2-2 1-6 5-2

___ ___ ___ ___ ___ ___ than that of younger birds.

ACTIVITY 19-6

DIRECTIONS: Unscramble the words in the left-hand column to complete the sentences related to market forms, inspection, and grading of poultry.

1. olewh — Poultry may be purchased either _ _ _ _ _ or in parts.

2. zrfnoe — Whole birds such as turkeys and cornish hens are often sold _ _ _ _ _ _.

3. shfer — _ _ _ _ _ poultry is sold dressed and ready to cook.

4. nedena — _ _ _ _ _ _ poultry items include chicken, turkey, and speciality foods such as chicken chow mein or turkey a la king.

5. pitdnseec — All poultry shipped between states must be _ _ _ _ _ _ _ _ _ and approved by the United States Deparment of Agriculture.

6. vlparpoa — The symbol of _ _ _ _ _ _ _ _ may be a metal disk clipped to the bird's wing, a paper tag stuck on the bird, or a printed emblem on the wrapping.

7. dtncionio — Federal poultry grading is based on conformation, fleshing, fat, cleanliness, and _ _ _ _ _ _ _ _ _.

8. metfnociroano — _ _ _ _ _ _ _ _ _ _ _ _ _ refers to the general form, shape, and body contour of the bird.

9. lnscensliae — To meet _ _ _ _ _ _ _ _ _ _ _ standards, the skin should be free from pin feathers and down.

10. gfsihlen — A check of the bird's _ _ _ _ _ _ _ _ indicates whether the flesh is plump, and firm-looking.

11. tnedoonii — A check of the bird's _ _ _ _ _ _ _ _ _ indicates that the bird is free from tears, cuts, bruises, blemishes, or defects such as disjointed or broken bones.

12. slhef — Grade C poultry has less _ _ _ _ _ than the higher grades.

ACTIVITY 19-7

DIRECTIONS: To review the handling, storage, and pre-preparation procedures for poultry and to identify convenience poultry products, complete the following activity. Circle the letter T if the statement is true. Circle the letter F if the statment is false.

T F 1. Fresh poultry should be tightly wrapped before refrigeration.

T F 2. Poultry can be stored up to seven days in the refrigerator.

T F 3. Poultry should be stored in the coldest part of the refrigerator.

T F 4. If wrapped tightly, poultry may be stored in the freezer at 0°F for up to one year.

T F 5. Frozen poultry must be defrosted before it is cooked.

T F 6. Canned poultry should be stored in a cool, dry place.

T F 7. Convenience products are available for fresh and canned poultry only.

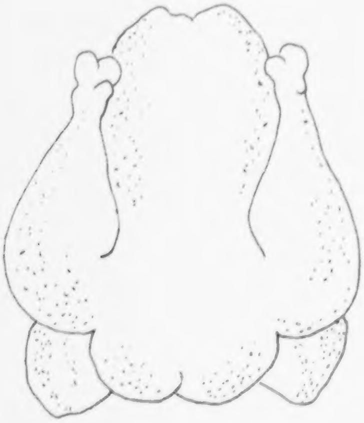
T F 8. Portioning and breading are common conveniences in fresh poultry.

T F 9. The amount of pre-preparation needed by poultry depends largely on whether the birds must be portioned before use.

T F 10. Pinfeathers cannot be removed from the skin of a bird.

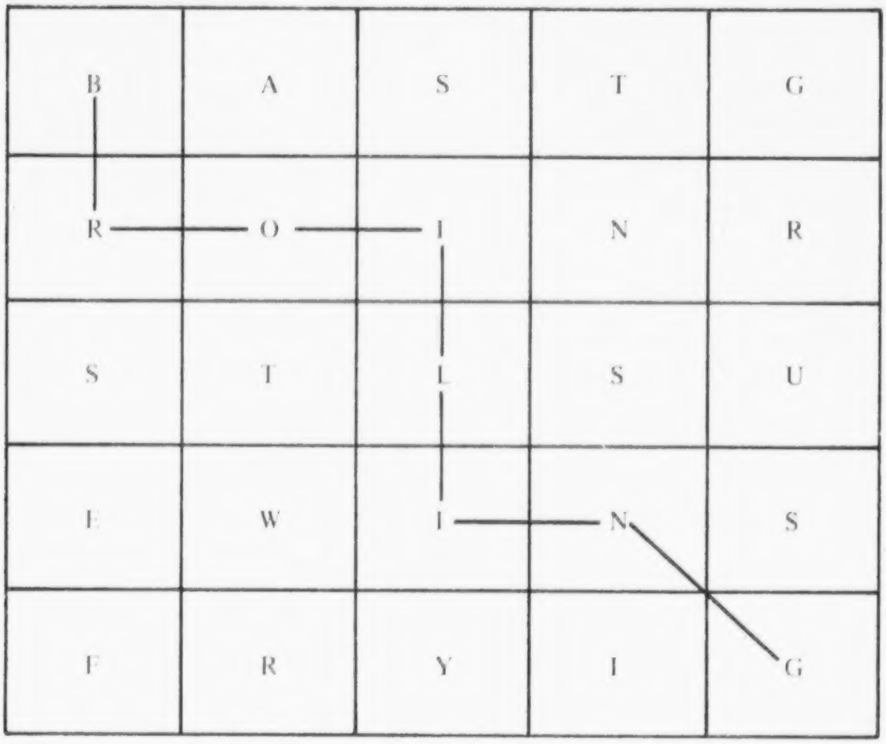
T F 11. Giblets should be removed from the body cavity before the bird is cooked.

T F 12. Poultry should be thoroughly washed under hot running water.



ACTIVITY 19-8

DIRECTIONS: Identify the methods of cooking poultry by finding the six methods in the word maze below. Find the words by moving a pen from one square to another: vertically, diagonally, horizontally. Using a different color pen or pencil for each word may help you distinguish between the words. Note: No letter in any square can be used more than once in the same word. One example has been provided for you.



B	A	S	T	G
R	O	I	N	R
S	T	L	S	U
E	W	I	N	S
F	R	Y	I	G

ACTIVITY 19-9

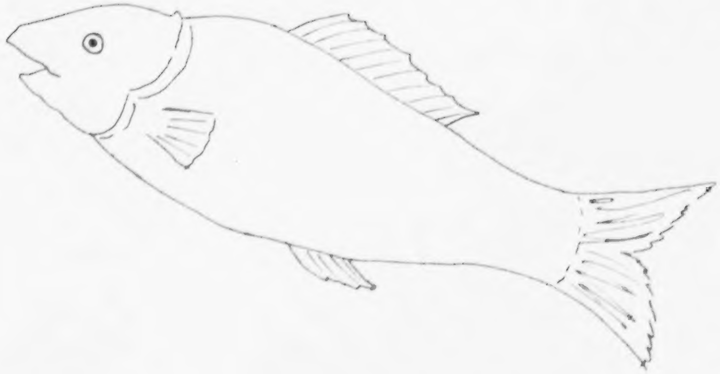
DIRECTIONS: Determine whether each cooking method is a moist heat method or a dry heat method by writing your answer in the second square on each row in the chart below. Next, list the characteristics of the birds cooked by each method in the third square on each row. Finally, summarize the procedure for each cooking method in the fourth square.

Cooking Method	Heat Method	Characteristics of Birds	Cooking Procedure
1. Braising			
2. Broiling			
3. Frying			
4. Roasting			
5. Stewing			

ACTIVITY 19-10

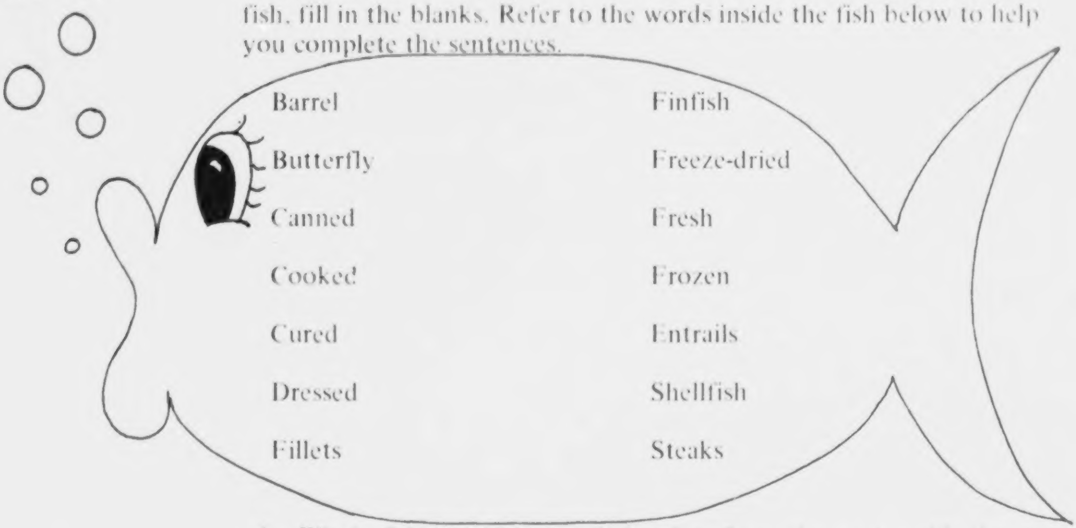
DIRECTIONS: Find the hidden types of fish below by filling in each blank with the letter that best completes the word.

1. Ⓣ _ _ U _
2. _ _ _ Ⓨ F _ _ _
3. _ N _ Ⓟ _ _ R
4. _ O _ _ I Ⓔ _
5. _ R _ Ⓢ _ _ _ _ A _ _
6. _ Ⓞ _ L _ _ K
7. F _ _ Ⓕ _ S _
8. Ⓕ _ _ U _ D _ _
9. S _ _ _ _ _ Ⓘ _ H
10. Ⓢ _ _ M _ _
11. _ Ⓗ R _ _ P



ACTIVITY 19-11

DIRECTIONS: To complete the sentences related to market forms of fish, fill in the blanks. Refer to the words inside the fish below to help you complete the sentences.



- Barrel
- Butterfly
- Canned
- Cooked
- Cured
- Dressed
- Fillets
- Finfish
- Freeze-dried
- Fresh
- Frozen
- Entrails
- Shellfish
- Steaks

1. Whole fish is sold just as it is taken from the water with the ________________ in tact.

2. ________________ fish is a whole fish with the internal organs, scales, head, tail, and fins removed.

3. ________________ are cross section slices from a large dressed fish.

4. ________________ are boneless lengthwise cuts from the sides of fish along each side of the backbone.

5. The piece of skin left to hold the two side cuts together is called a ________________.

6. Fish which has been salted, smoked, or pickled is referred to as ________________ fish.

7. Lobsters and crabs may be purchased fresh, cooked, frozen or ________________.

8. ________________ finfish is available in preportioned sticks, squares, rectangles, and fillet-shaped pieces.

9. Shrimp may be purchased frozen or ________________, raw or ________________, canned or ________________.

10. Oysters and clams may be purchased alive in the shell by the dozen, the bushel, or the ________________.

11. Popular canned ________________ include salmon, tuna, and sardines.

12. Canned ________________ include oysters, clams, lobsters, crab, scallops, and shrimp.

ACTIVITY 19-12

DIRECTIONS: To review the procedures for selecting, handling, storing, and preparing fish and to identify the menu uses and convenience forms of fish, answer the following questions.

1. List five characteristics that can be used to judge the freshness of finfish:

____

____

____

____

____

2. List one characteristic that can be used to judge the freshness of each of the following shellfish:

- shrimp ______________________
- shucked oysters and clams ______________________
- live clams and oysters ______________________
- live lobsters ______________________
- scallops ______________________

3. Describe three menu uses of fish:

____

____

____

4. Describe the handling and storage procedure for each of the following:

- fresh fish ______________________
  ____
- frozen fish ______________________
  ____
- canned fish ______________________
  ____

5. Summarize the pre-preparation procedure for each of the following shellfish:

- lobsters and crabs ______________________
  ____
- shrimp ______________________
  ____
- clams ______________________
  ____
- oysters ______________________
  ____

ACTIVITY 19-13

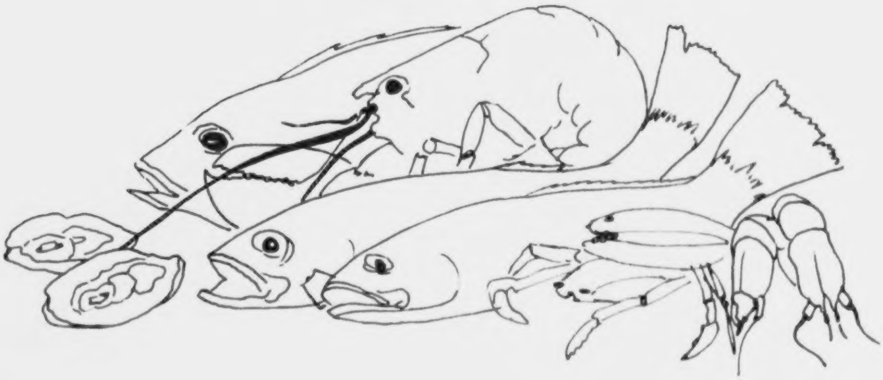
DIRECTIONS: Place the letter of each cooking method in the blank to the left of the fish or type of fish that it is used for. Most blanks will have more than one answer.

Types of fish

_____ 1. Clams
_____ 2. Crab
_____ 3. Fat finfish
_____ 4. Fish steaks or fillets
_____ 5. Large, whole finfish
_____ 6. Lean finfish
_____ 7. Lobsters
_____ 8. Oysters
_____ 9. Scallops
_____10. Shrimp
_____11. Small, whole finfish

Cooking Methods

A. Baking
B. Boiling
C. Broiling
D. Deep-fat frying
E. Pan-frying
F. Poaching
G. Sauteeing
H. Steaming
I. Stewing



20

Chapter Twenty
Eggs and Cheese

COMPETENCIES TO DEVELOP

- Prepare eggs and egg dishes.
- Prepare cheese and cheese dishes.

OBJECTIVES TO ACHIEVE

- Outline criteria for selecting eggs.
- Identify convenience egg products available.
- Identify menu uses of eggs.
- Describe various methods of preparing eggs.
- Describe uses of eggs as ingredients.
- Describe ways to use eggs as garnishes.
- Describe procedures for serving and garnishing eggs.
- Summarize procedures for holding and storing eggs and egg dishes.
- Identify various kinds of cheese.
- Outline criteria for selecting cheese.
- Identify menu uses of cheese.
- Describe procedures for preparing cheese and cheese dishes.
- Summarize procedures for holding and storing cheese and cheese dishes.

Knowledge of the correct procedures for preparing eggs, egg dishes, cheese, and cheese dishes is extremely beneficial to food service workers due to the popularity of these food items. Eggs and cheese are important both as main dishes and as ingredients for recipes. In addition, both eggs and cheese can be used to garnish other foods.

ACTIVITY 20-1

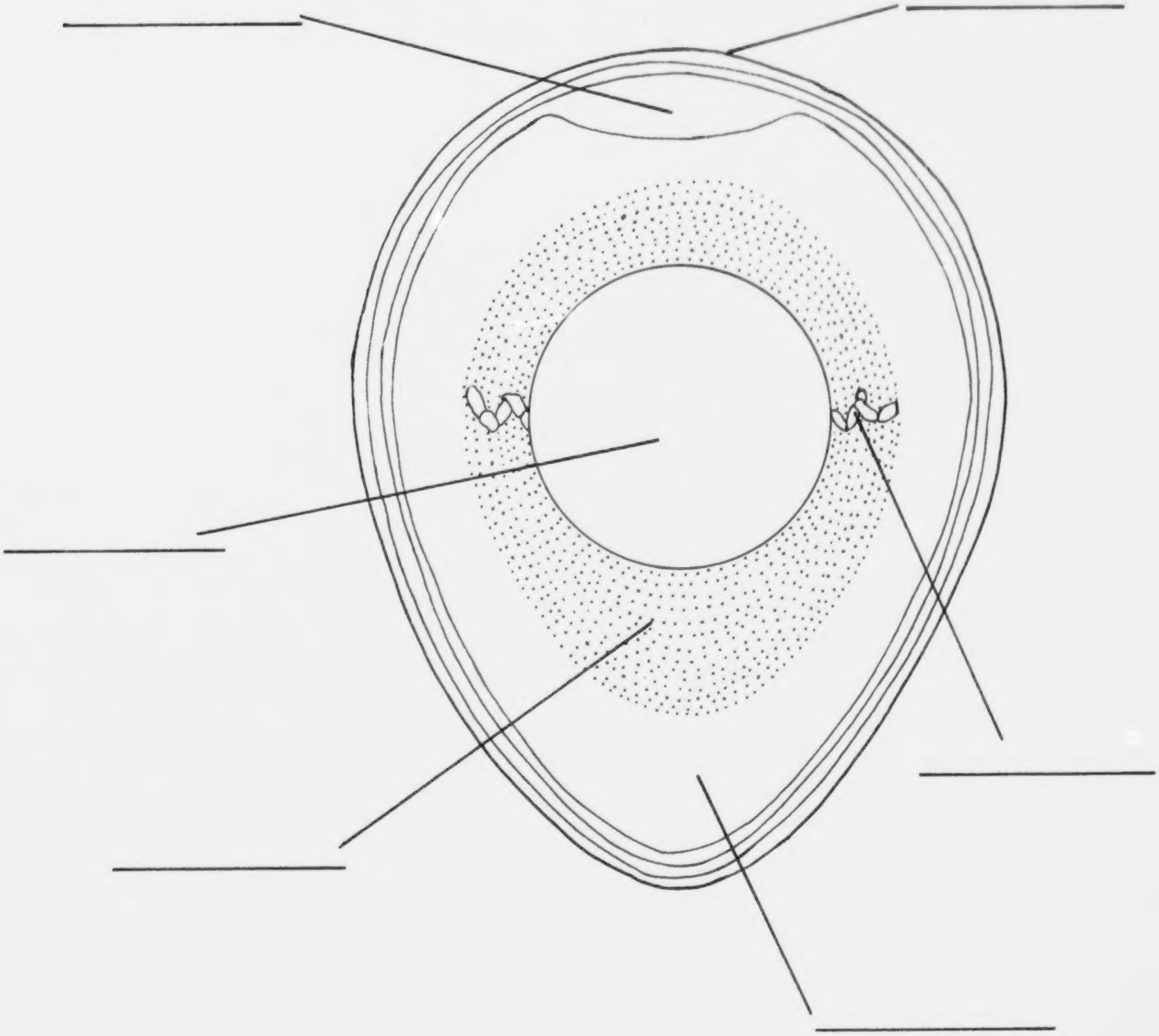
DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

candling
chalaza
cold pack
curds
fortified eggs
frozen eggs
parmesan
poaching dish
ramekin
rennet
sharpness
simmering point
soft-peak stage
stabilizers
vacuum-packed
whey

Additional terms

ACTIVITY 20-2

DIRECTIONS: Label the diagram of the egg below according to the written description of eggs in Chapter 20 of *Food Production, Management, and Service.*



ACTIVITY 20-3

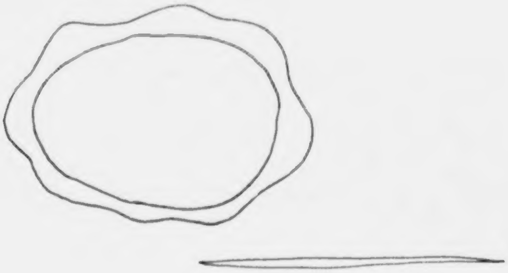
DIRECTIONS: Write the number of each grade of egg in the blank to the left of the picture that best illustrates that grade of egg. Note: The illustrations show both a top view and a side view of each egg.

Illustrations of eggs

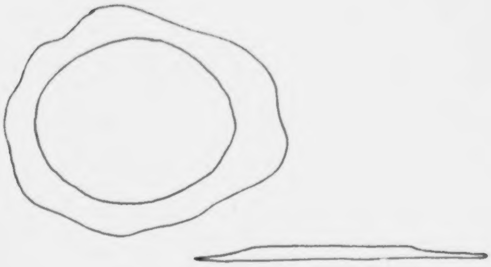
Grades of eggs

1. Grade AA
2. Grade A
3. Grade B

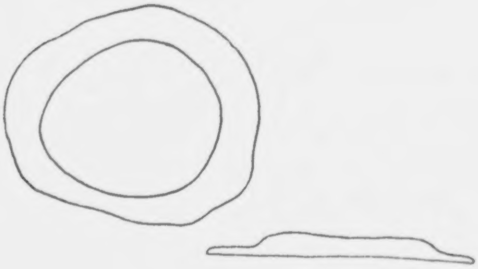
______A.



______B.



______C.

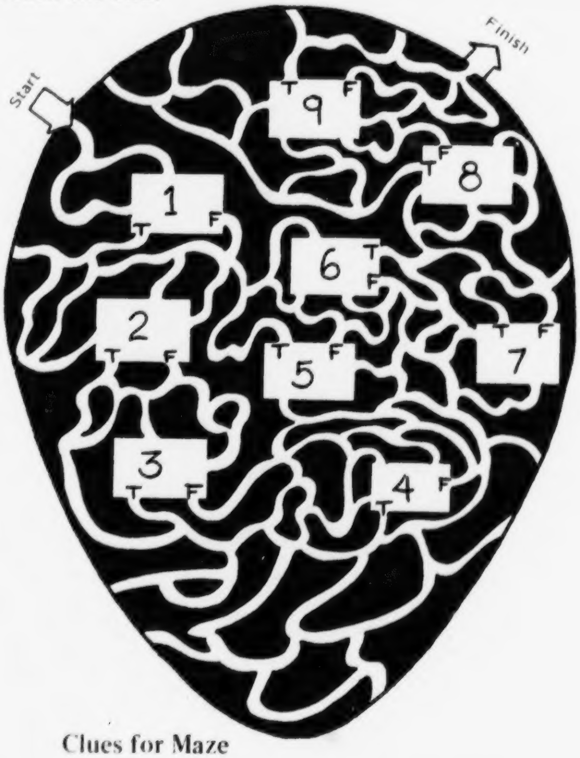


Justify your answers to this activity by listing the qualities or characteristics that you used to determine the grade for each egg above.

A. ______________________ B. ______________________ C. ______________________

ACTIVITY 20-4

DIRECTIONS: The following activity will help you to identify convenience egg products. Move through the egg maze below by circling the T in box #1 if clue #1 (following the maze) is true or by circling the F if the clue is false. Then use your pencil to follow the path of the letter you circled until you reach box #2. Repeat this process until you reach the end of the maze. Note: Each item must be answered correctly in order to reach the end.



Clues for Maze

1. Eggs may be purchased in fresh, frozen, or dried form.

2. The size of the egg has a direct influence on its qualiity.

3. Jumbo eggs weigh approximately 15 ounces per dozen.

4. Thawed frozen eggs and reconstituted dried eggs are highly perishable.

5. Dried eggs are available whole, yolks only, or whites only.

6. Fortified eggs are mixtures with more egg whites than egg yolks.

7. Liquid whole eggs are often cheaper than frozen eggs.

8. Thaw frozen eggs by letting them stand at room temperature.

9. Unopened packages of dried eggs should be stored in a cool, dry place or in the refrigerator.

ACTIVITY 20-5

DIRECTIONS: In the blanks provided, answer the questions related to menu uses of eggs.

1. What type of eggs are popular for breakfast? ____________________

2. What egg dishes are popular for lunch or a light supper? ____________________

3. What type of egg is often used in sandwiches and salads for lunch?

4. Name an egg dish that can be served at any meal. ____________________

5. Name three popular foods that are made with eggs. ____________________

ACTIVITY 20-6

DIRECTIONS: To review the uses and functions of eggs as ingredients, complete the following activity. Unscramble the words in the left-hand column. Then write each unscrambled word on the broken lines under the column heading, "Type of Ingredient." In the right-hand column, list one example of a food product that would contain each type of ingredient.

Scrambled word	Type of Ingredient	Product
1. recfialir	_ _ _ _ _ _ _ _ _	____________
2. nhriktcee	_ _ _ _ _ _ _ _ _	____________
3. dnebir	_ _ _ _ _ _	____________
4. vglaniene	_ _ _ _ _ _ _ _ _	____________
5. serfilumie	_ _ _ _ _ _ _ _ _ _	____________
6. tincgao	_ _ _ _ _ _ _	____________

ACTIVITY 20-7

DIRECTIONS: To review the uses of eggs as garnishes, and to review procedures for serving, garnishing, and storing eggs and egg dishes, answer the following questions.

1. List three food items for which hard-cooked eggs may be used as a garnish?

   ____

   ____

   ____

2. Describe the proper procedure for serving and garnishing the following egg dishes:

   - Eggs Benedict ____
     ____
   - Western-style poached eggs ____________________________________
     ____
   - Eggs Florentine ____
     ____
   - Eggs Mornay ____
     ____
   - Scrambled eggs ____
     ____
   - Omelets ____
     ____

3. Describe the proper procedure for holding and storing each of the following:

   - Fresh eggs ____
     ____
   - Dried eggs ____
     ____
   - Cream, custard, or meringue pies ______________________________
     ____

ACTIVITY 20-8

DIRECTIONS: Play a game of cheese scrabble by listing one kind of cheese and then branching off that word with other kinds of cheeses. Try to include as many kinds of cheeses as you can. Below is an example using fruits:

```
    B
    A P P L E S
    N
    A
    N
O R A N G E
        R
        A
        P
      P E A R
        S
```

ACTIVITY 20-9

DIRECTIONS: Match each classification of cheese with its description by writing the letter of the classification in the blank to the left of its description.

Description	**Classification of cheeses**
_____ 1. Made from a combination of ground cheeses.	A. Imitation Cheeses B. Natural Cheeses
_____ 2. Made from one or more ground natural cheeses mixed with nonfat dry milk solids and water.	C. Pasteurized Process Cheese Food D. Process Cheeses
_____ 3. Made from milk combined with a starter.	
_____ 4. Made from milk protein and vegetable oils.	

ACTIVITY 20-10

DIRECTIONS: To review the menu uses of cheese as well as the procedures for selecting, preparing, and storing cheese, answer the following questions.

1. What criteria should be considered when selecting cheese for cooking?

____

____

____

2. List three different forms in which cheese can be purchased:

____

____

____

3. What four characteristics are USDA grades for cheese based on?

____________________ ____________________

____________________ ____________________

4. Give an example of a food product in which cheese is used as a(n):

- appetizer ________________________________
- dessert ________________________________
- garnish ________________________________
- main dish ________________________________
- topping ________________________________

5. Describe the procedure for preparing cheese for an uncooked food product:

____

____

____

6. Describe the procedure for preparing cheese for a cooked food product:

____

____

____

7. What is the result of overcooked cheese?

____

____

8. Describe the procedure for storing cheeses:

____

____

9. What type of cheeses should be used before the expiration date marked on the package?

____

ACTIVITY 20-11

DIRECTIONS: To review the methods of egg preparation, complete the word search below. Read the statements following the word search and fill in the broken lines with the word that best completes each sentence. If you've filled in the correct answers, you should be able to find each word in the word search. The words may run across, up, down, backward, or diagonally. Circle each word you find.

WORD SEARCH—EGG PREPARATION

R X G L W O D Q F B O O V I C B R O J O C X J I V K P P Y M O Z
Y R N B G P S E N J N F A X K D C Q W O O P Y X R L I T O D X C
K A S R U U H G C O R I T V T R R J H W F O G X J D X A N R S C
X T N W K O A D U W B Y I Q G J F M B F N A K N H A C J L J F W
V K E Y Q Y I W Y I C V B X Z X Z M E R T H J Z G I R S C F U V
X F W L K P Z B X Y O E I L D R O J E T M D E R Q M J L K D S O
W B X D E S E P L X A Y U R M U U S Q N S A X R V P A F B E O O
E Z Z H R M X Z N K J H A T G W I J D U J L D H U E Z B H H F J
L K L X T C O N D Y D B T B C A P I U E Q Z W E D X O M I C M J
T J S H B U I A I S V W F Z R I H J O I N N D P B S P C L A D Q
X Q O L C Q Q W E C F H Q B W C D U R C G I P A Y L J X R O W F
Y B V E K E R V S L D I C F C H O E R N S I A Y C U S Q L P M R
S T E Y Z K L M S V J I U A H Q H B N Y K Q K D E T S A B Z N M
T X N R I H T K P I S V D J G D B P N E V E M V A Z D L V I J I
H Y F D V D S W P I X E M Q L N Z N P W B Y C U F E C L A W P Q
K I R Z I P Y J N T G H A K W D U I Z I V S L Q I S U M T Q R F
J E I Z N P W S E X M V K M Y S E Y C N F U G R G I U R T X K Y
X K E M E I I X I H A V L C F H N L I F X B F G O J D D V L K U
S Y D T G U A F B O G P L G K U A A B Q K D C Q E D C O P K K H
A I M I A P R S B P H F W Y T F L G O M R P T C E Y I T C E L Z
F Q I H R T Q X W Y Y N G Q D P K X M A A E L L T F R P I N J X
V H V Q R N M V W L U A Q K O E G H H T N R I U I F S O N Q P E
Q R N O I T A R O L O C S I D N K Y X D S V C H S U Z M M C G O
M X B W R V G D O Y P R O G I S J A E Z E N J S I L Q X Z G J I
E H M P L V Y F J W F V E D J Q U R B D S T N E O F A E S B C W
D E K O O C D R A H E I L X D P N S O F T C O O K E D M B Z F Y
T V W E U S M I E R V O R E K E G D H H F G Q M B I O A T S M J
L T T X Y T F R E T F T I M S W O C I G I A B U Q R I P L V S N
B C L Y U E R A V T A R B S N S I R X W O X Y C N K E R C E Z E
N J S E K X S H S O F W X Z I E P M Z F D Z Q A R Z I P N C L G
W D N T X Y N S N D L E Z D X J S B O L R B Y I Z A F L A F U M
F Q M W M A J S W M C F M S H C V S Y J H O G F C Z H G U E R M

1. __ __ __ __ - __ __ __ __ __ __ eggs are eggs that have been cooked in the shell for a short period of time.

2. __ __ __ __ - __ __ __ __ __ __ eggs can be cooked in a steamer at 5 pounds of pressure, then plunged at once into cold water.

3. Cooling eggs immediately after cooking helps to prevent __ __ __ __ __ __ - __ __ __ __ __ __ __.

4. For __ __ __ __ __ __ __ eggs, the yolks of halved hard-cooked eggs are mixed with seasoning and mayonnaise.

5. __ __ __ __ __ eggs are cooked in a small amount of fat over very low heat.

6. The length of cooking determines the degree of ___ ___ ___ ___ ___ ___ ___ ___.

7. ___ ___ ___ ___ ___ - ___ ___ ___ ___ ___ ___ or "eyes open" means the egg is cooked without turning, the yolk runs when broken, and the white is firm.

8. ___ ___ ___ ___ - ___ ___ ___ ___ means the egg is turned over while frying, the white is firm, and the yolk is soft.

9. ___ ___ ___ ___ - ___ ___ ___ ___ ___ means the egg is cooked until both the white and yolk are firm, but not rubbery.

10. ___ ___ ___ ___ ___ ___ means the eggs are cooked in hot fat in a skillet or on the griddle and basted with fat without turning until the desired hardness is reached.

11. Eggs can be ___ ___ ___ ___ - ___ ___ ___ ___ ___ at 400°F for 5-7 minutes.

12. ___ ___ ___ ___ ___ ___ ___ eggs are cooked in a small amount of water below the boiling point.

13. Adding a small amount of salt or ___ ___ ___ ___ ___ ___ ___ to the water helps harden the whites before they spread in the water.

14. For ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___, poached eggs are served on a toasted English muffin with a slice of Canadian bacon and topped with hollandaise sauce.

15. ___ ___ ___ ___ ___ eggs are placed into a lightly greased cup, muffin tin, or ramekin and cooked in the oven at a moderate temperature for 15-20 minutes.

16. For ___ ___ ___ ___ ___ ___ ___ ___ ___ ___, eggs are baked in cheese sauce and sprinkled with grated cheese.

17. ___ ___ ___ ___ ___ ___ ___ ___ ___ eggs are made of beaten eggs.

18. A small amount of water, milk, or cream is added to the blended egg to ensure ___ ___ ___ ___ ___ ___ ___ ___ ___ ___.

19. High heat and overcooking causes scrambled eggs to "weep" or become ___ ___ ___ ___ ___ ___.

20. Eggs can be scrambled in a saute pan or on the griddle, a double boiler or bain-marie, in a ___ ___ ___ ___ ___ ___ ___, or in a shallow baking pan in the oven.

21. An ___ ___ ___ ___ ___ ___ is a mixture of eggs, salt, and pepper cooked in a saute pan.

22. A ___ ___ ___ ___ ___ omelet is a French omelet cooked on top of the range.

23. A ___ ___ ___ ___ ___ ___ omelet is started on top of the range and finished in the oven.

24. A filling of jelly, chopped meat, poultry, seafood, cheese, vegetables, or chopped herbs should be added just before ___ ___ ___ ___ ___ ___ ___ the omelet.

21

Chapter Twenty-one
Cereals and Pastas

COMPETENCY TO DEVELOP

- Prepare cereal and pasta products.

OBJECTIVES TO ACHIEVE

- Identify cereals and pastas.
- Outline criteria for selecting cereals and pastas.
- Describe convenience cereal and pasta products available.
- Describe menus uses of cereals and pastas.
- Describe methods for preparing cereals and pastas.
- Summarize procedures for holding and storing cereal and pasta products.
- Outline procedures for serving cereal and pasta products.

Many of the foods that you eat everyday come from seeds of edible grasses. These seeds are called grains. Cereals and pastas are made from grains. Rice is an example of a common cereal grain, and spaghetti is an example of a popular pasta. Other examples of cereals and pastas will be presented in this chapter.

ACTIVITY 21-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

cereal grains ______________________________

gelatinize ______________________________

polished rice ______________________________

pre-cooked ______________________________

ready-to-eat ______________________________

whole grain ______________________________

Additional terms

ACTIVITY 21-2

DIRECTIONS: Review the criteria for selecting cereals and pastas and the convenience cereal and pasta products available by completing the following activity. First read each statement and fill in the blank with the word that best completes the sentence. If you have filled in the correct answers, you should be able to find each one in the word search that follows the statements. The words run across, up, down, backward, or diagonally. Circle each word you find.

1. __ __ __ __ __ __ __ are the edible seeds produced by certain plants of the grass family.
2. Wheat, rice, oats, barley, rye, corn, and buckwheat are referred to as cereal grains or __ __ __ __ __ __ __ __.
3. Breakfast cereals, __ __ __ __ __ __, and flour are all made from cereal grains.
4. The __ __ __ __ is the outside covering of the grain which supplies fiber and vitamins.
5. The __ __ __ __ __ __ __ __ __ is the white, inner portion of the kernel and is mostly carbohydrate.
6. The __ __ __ __ is a rich source of vitamins, protein, and fat found at one end of the kernel.
7. In __ __ __ __ __-__ __ __ __ __ grain products, all three parts of the kernel are kept together.
8. __ __ __ __ __ __ __ grain products contain the endosperm of the grain; the bran or hull of the grain and the germ are removed.
9. To restore the vitamins and minerals lost in the refining process, many grain products are __ __ __ __ __ __ __ __.
10. When more nutrients are added to the grain product than were removed during processing, the product is said to be __ __ __ __-__ __ __ __ __.
11. Cereal products are usually purchased by __ __ __ __ __ __ rather than by size of package.
12. __ __ __ __ __ rice has had only the hull removed during processing and is available in regular and instant forms.
13. __ __ __ __ __ rice is polished until only the endosperm is left.
14. __ __ __ __ __ __ __ __ __ rice has been treated to retain the nutrients.
15. __ __ __ __ __ __ rice has been treated with glucose and talc to make the rice look more polished and improve its keeping qualities.

16. ___ ___ ___ ___ rice is the seed of a wild grass blended with long grain rice.

17. The best pastas are made from ___ ___ ___ ___ ___ wheat containing a very high proportion of gluten.

18. The four main shapes of pastas include rods, ribbonlike strips, fancy shapes, and ___ ___ ___ ___ ___.

19. Convenience breakfast cereals range from ready-to-eat cereals, to partially pre-cooked cereals, to ___ ___ ___ ___ ___ ___ ___ cereals.

20. Convenience ___ ___ ___ ___ products include white or polished, pre-cooked, and instant.

WORD SEARCH–CEREALS AND PASTAS

C K X J S Z S F Z M M R D O A Q A D M X H J X B T G N S
L H J R F H T U N I K I Z A R M R E W W H U D C P U W V
O S J J U C T I D N S Y Q K U I W T Q W X X D G O V H I
L X G M T U D E N R I C H E D N J A O K J V E E F Y H J
L F M C F I W O E H F M E G C S W O F T U L N V V Q Q J
K I V D Q I X Y N Y E U N Z S T C C H P I U I P K K B Y
G S G N H G M T H I S L W B C A R I V X M N F B K X M L
M D J A L L R M V A Z V A E Z N R Z C J D G E J E E G N
C A M G O Q E L R C H E M F S T M C V R T M R K R Q M H
E C A A N G P W A U I T R F S D L L S E Q Q J S O N P G
K R C Q A L S R D P P I K N I H N L U P M T Y U P Y Y S
H Q H U D C O T J O Y P R F U H A Y E X A D D K O B A W
E R V F A J D E E R N A S Z V E U A C S V D W L R K L E
E N U O P E N G E R M R R O R K S J R O E A F A I M Z I
W Y B O P V E W K L Z U P E J O E V R G L O N N U W D H
F S S E F T C Q U O T G C Y L T L V V T R D S D L A U R
M T D A O J M Z Q Z I N A G V B R X E T D E B B J K Y O
C J W T J S N A Y X B U H P M M I H I K N T G R O S T S
P C D E X T M X X X F Q J R S F Z F X G L R M Y O R J G
H H X J I M G U T K Y P K Z G T I S P B J E J I T W Q S
M F G I F G A U U Y F M U X W E N T F F O V T A B I N Q
T F S K U C H G B U P V U O D I E C I R S N M I A O G J
Z Q P L R S N T E Q P M A R A C S E A Y C C C H H U N Y
I Z E R T R B M S A N W V R U E I X P H T C W E R W U L
P T T J K T J V S C T E G N T D L D V L H H T W I D N K
W T V J E T K T X S W X C J Z Z G A I Q S N R F Z Z A N
U B Y Q F V A M S D Q C Z H Z X P D O A X U O J V S P P
H J E Q A S Q V R I D D X V H C A N E V S C Y L Y D T Z

ACTIVITY 21-3

DIRECTIONS: In the chart below, describe the menu uses of each grain product listed in the left-hand column.

GRAIN PRODUCT	MENU USES
Breakfast cereals	
Rice	
Pastas	

ACTIVITY 21-4

DIRECTIONS: Answer the following questions in the space provided.

1. What are the principles of starch cookery?

2. What three things occur as starches cook?

3. What will occur if excess water is used to cook grain products?

4. What will occur if cereals and pastas are overcooked?

5. What does *al dente* mean? To what products does use of this term apply?

6. Why should excessive stirring be avoided when cooking grain products?

7. Why is salt added to the boiling water used to cook cereals and pastas?

8. Describe two methods that can be used to keep rice from sticking together as it cooks:

9. How should spaghetti be held if it is not served immediately?

ACTIVITY 21-5

DIRECTIONS: Assume that you are employed in a food service establishment and are responsible for serving the food products listed below. In the blanks beside each product, give a *detailed* account of how you would garnish and serve that particular product.

1. cold breakfast cereal ____________________

2. hot breakfast cereal ____________________

3. spaghetti ____________________

705

22

Chapter Twenty-two Vegetables and Fruits

COMPETENCY TO DEVELOP

- Prepare fruits and vegetables.

OBJECTIVES TO ACHIEVE

- Summarize considerations in selecting vegetables and fruits.
- Identify menu uses of vegetables and fruits.
- Describe preparation needed for vegetables and fruits.
- Summarize procedures for cooking vegetables and fruits.
- Outline procedures for serving and garnishing vegetables and fruits.
- Cite guidelines for holding and storing vegetables and fruits.

Can you imagine a world of food without fruits and vegetables? Not only do fruits and vegetables provide beautiful colors and interesting textures for our meals, but they also can be used in a multitude of different ways. They're also important sources of vitamins and minerals.

A variety of vegetables and fruits are served in food service establishments. Modern methods of processing, transportation, and storage make vegetables and fruits available in fresh, frozen, canned, and dried forms all year.

ACTIVITY 22-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

au gratin ____________________________________

cellulose ____________________________________

core ____________________________________

cottage potatoes ____________________________________

crisped ____________________________________

dice ____________________________________

free steam ____________________________________

French fried ____________________________________

fritters ____________________________________

mild-flavored ____________________________________

mince ____________________________________

overripe ____________________________________

pit ____________________________________

potato rounds ____________________________________

pounds per square inch (psi) ____________________________________

sauteed ____________________________________

scalloped ____________________________________

shoestring potatoes ____________________________________

shred ____________________________________

slice ____________________________________

stir-frying ____________________________________

strong-flavored ____________________________________

thick steak potatoes ____________________________________

underripe ____________________________________

U.S. Grade A Fancy ____________________________________

U.S. Grade B Choice ____________________________________

U.S. Grade C Standard ____________________________________

Additional terms

____

____

____

____

ACTIVITY 22-2

DIRECTIONS: There are eighteen different fruits in the word search below. The words run across, up, down, backward, or diagonally. Circle each word you find.

WORD SEARCH–FRUITS

```
U S M I V K G D H H F G Z M B I A T
S M J L T T X Y T F R T W O C I G I
A B U Q P I N E A P P L E S I P L V
S N P G R A P E S B C L Y U E R V T
B S E I S R X M W O X Y C K E R C E
Z E A N J T U S E K S X H S O X Z I
P M C Z H L R F D F B A N A N A S Z
Q R H S P O L A I Z I P S N C L G S
Q W E D T E N R W N T X E N S S N O
D U S L M I R E E B Z D C X E J B D
O L I O R E U B Y I E Z N A L F A A
L A N N B F U R M D F R A Q P M P C
W S M E C A J S F W E M R C P F R O
M S U H C E V Y J E H W O I A P I V
O L G F C Z H G U E P R S M E F C A
B Y S E P U O L A T N A C A P S O E
W A T E R M E L O N S D R M M U T W
G X Q Y C N X G P T V S H G N D S A
```

Using the fruits you identified in the word scramble, give three examples of each of the following kinds of fruit:

POMES: ______________ ______________ ______________

DRUPES: ______________ ______________ ______________

BERRIES: ______________ ______________ ______________

CITRUS
FRUITS: ______________ ______________ ______________

MELONS: ______________ ______________ ______________

TROPICAL
FRUITS: ______________ ______________ ______________

ACTIVTIY 22-3

DIRECTIONS: There are sixteen different vegetables in the word search below. The words run across, up, down, backward, and diagonally. Circle each word you find.

WORD SEARCH—VEGETABLES

```
I S V D J G D B P V E M V A Z L V I
J I H Y D D S W A T I N I H C C U Z
P I X E M Q L S N O Z P W Y C U F C
L A W P Q K P I Z M P Y J N T G H A
K W I Z I A V L Q A S U M T Z O N R
F J E Z R P W S E T S X M N V R K L
M Y Y A C C F U G C B P O I O U R E
T X G S Q U A S H E J U I C T C X N
K U M I I X I R E S N T S N A E B T
S H A V L C F T R O H L U U A P N I
F X B O J D S D V O E L L R E C K L
I L O C C O R B U T T I S A N Y H S
T U A F B O G P T L F S S G K I U A
Q K C Q C O P U K L K H A I M I P P
R S B P H F C W O Y T F G O P C I S
T C E L Z E F W Q I H T Q X W Y Y N
G Q K X M L E T R P I N J X V H V Q
R N M V W R L U A Q K O H T U I S O
```

Using the vegetables you identified in the word scramble, give one example of each of the following classifications:

PART OF PLANT

Root: ______________________________

Bulb: ______________________________

Stem: ______________________________

Leaf: ______________________________

Flower: ______________________________

Pod/seed: ______________________________

Fruit: ______________________________

COLOR

White: ______________________________

Yellow: ______________________________

Green: ______________________________

Red: ______________________________

FLAVOR

Strong: ______________________________

Mild: ______________________________

MOISTURE CONTENT

High: ______________________________

Low: ______________________________

Dry: ______________________________

ACTIVITY 22-4

DIRECTIONS: In the blanks below, list the four forms in which vegetables and fruits may be purchased.

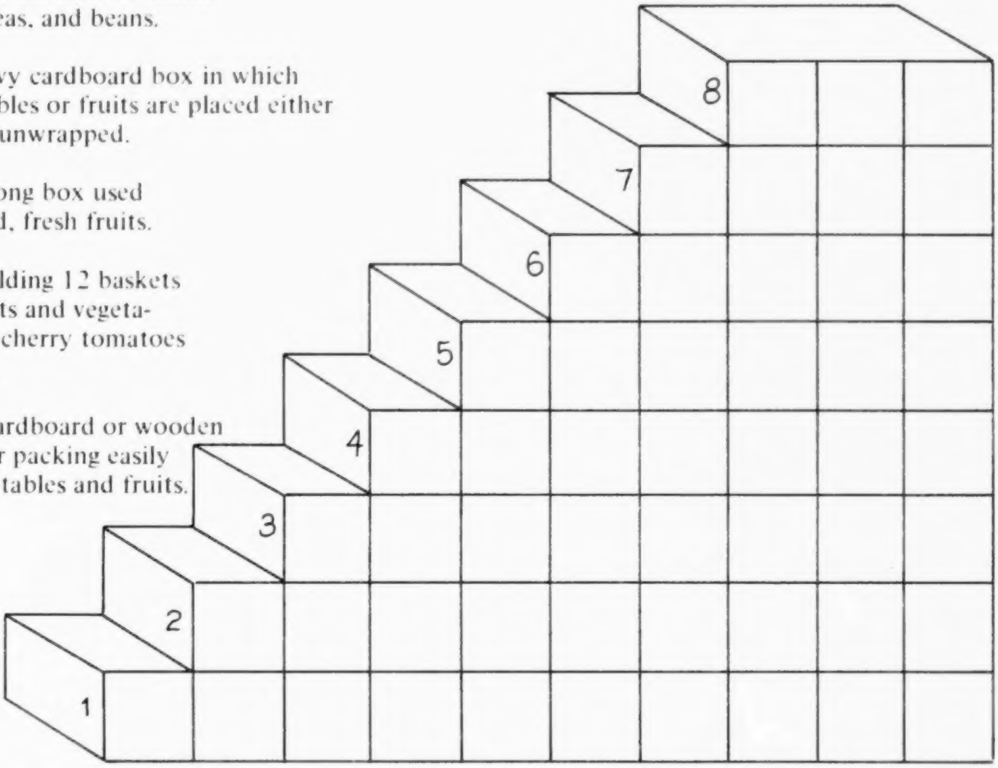
1. ______________________ 2. ______________________

3. ______________________ 4. ______________________

Now, read the clues below to figure out the meaning of each word regarding the purchasing forms of fruits and vegetables. Write the word in the puzzle boxes to the right of the number corresponding to the number of the clue. Begin the puzzle with the first clue.

CLUES

1. Fresh vegetables and fruits from which most of the water has been evaporated.
2. The process of applying steam to seal the outside of the vegetable before freezing.
3. A deadly form of food poisoning sometimes found in spoiled, canned vegetables or fruits.
4. Dried vegetables such as lentils, soybeans, peas, and beans.
5. A large, heavy cardboard box in which fresh vegetables or fruits are placed either wrapped or unwrapped.
6. A large, oblong box used to pack solid, fresh fruits.
7. A carton holding 12 baskets of fresh fruits and vegetables such as cherry tomatoes and berries.
8. A shallow cardboard or wooden box used for packing easily bruised vegetables and fruits.



710

ACTIVITY 22-5

DIRECTIONS: Answer the following questions related to menu uses, preparation procedures, and cooking principles for fruits and vegetables.

1. Describe three menu uses for fruits and three menu uses for vegetables:

____

____

____

____

____

2. Why should the skin or peel of vegetables and fruits be pared or scraped very thinly? ______________________________

____

3. Describe the procedure for crisping leafy and stemmed vegetables:

____

____

____

____

4. Name and describe four procedures which can be used to cut fruits and vegetables: ______________________________

____

____

____

5. How can discoloration be prevented in cut fruits with low acid content? ______________________________

____

6. Describe three cooking principles which should be observed when cooking vegetables and fruits: ______________________________

____

____

____

____

ACTIVITY 22-6

DIRECTIONS. Read the following statements regarding cooking methods. If a statement is true, circle the letter T to the left of the statement. If a statement is false, circle the letter F.

T F 1. Boiling is the most popular method for cooking fresh vegetables.

T F 2. When boiling, add the vegetables or fruits just before the salted water or liquid begins to boil.

T F 3. Steaming is an excellent method for cooking vegetables because it is fast, it retains nutrients, and it preserves color.

T F 4. The pressure steamer is primarily used to cook delicate, quick-cooking vegetables.

T F 5. Fresh potatoes should be soaked in water before deep-fat-frying.

T F 6. Sauteeing may be used as a preliminary step in preparation.

T F 7. In stir-frying, vegetables are cooked very slowly and then seasoned with soy sauce.

T F 8. Baking in their skins is a popular method for cooking solid, low-moisture vegetables.

T F 9. Tomatoes are the most popular boiled vegetable.

T F 10. To cook vegetables in a microwave oven, cut the vegetables evenly into large pieces and place in a square, aluminum pan.

ACTIVITY 22-7

DIRECTIONS: In the column, **VEGETABLE GARNISHES**, put an X in the blank to the left of each item that you think would be an appropriate garnish for vegetables. In the column, **FRUIT GARNISHES**, put an X in the blank to the left of each item that you think would be an appropriate garnish for fruits.

VEGETABLE GARNISHES

_______ almonds

_______ sour cream

_______ cookie crumbs

_______ spices

_______ mint sprig

_______ herbs

_______ maraschino cherries

FRUIT GARNISHES

_______ whipped cream

_______ pearl onions

_______ buttered bread crumbs

_______ shaved chocolate

_______ ice cream

_______ chopped nuts

_______ mushrooms

ACTIVITY 22-8

DIRECTIONS: Put an X in the blank to the left of each vegetable combination that you think would be attractive and colorful served together.

________ green beans and mushrooms

________ carrots and celery

________ cauliflower and pearl onions

________ potatoes and onions

________ peas and green beans

ACTIVITY 22-9

DIRECTIONS: Complete the following sentences related to holding and storing procedures by supplying the missing letters in the blanks provided.

1. Fresh vegetables used as appetizers or garnishes or in salads may be prepared in advance and stored in the r ___ ___ ___ ___ g ___ ___ ___-___ ___ r.

2. Prepared salads should be kept on ___ c ___ until served.

3. Cooked vegetables should be prepared in small quantities and s ___ ___ v ___ ___ immediately.

4. L ___ ___ ___ o ___ ___ r vegetables should be refrigerated and used in soups or casseroles.

5. Leftover vegetable juices and cooking liquid should be used as the liquid in soups and s ___ ___ c ___ ___.

6. Fresh fruits which darken after cutting should be treated with ascorbic acid or ___ ___ m ___ ___ juice to keep them bright.

7. Frozen fruits should be ___ h ___ w ___ ___ in the refrigerator and used quickly.

8. ___ ___ n ___ ___ d fruits and juices may be served at room temperature or chilled first.

9. Leftover fresh or frozen fruits should be d ___ ___ c ___ ___ d ___ ___.

10. Leftover cooked or canned fruits should be r ___ f ___ ___ ___-___ ___ ___ t ___ ___.

23

Chapter Twenty-three
Breads

COMPETENCY TO DEVELOP

- Prepare breads.

OBJECTIVES TO ACHIEVE

- Identify types of breads.
- Identify the ingredients used in breads.
- Identify menu uses of breads.
- Describe methods of preparing breads.
- Identify convenience bread products available.
- Describe procedures for serving breads.
- Summarize procedures for holding and storing breads.

Fresh, hot bread is often the featured menu item which draws people back to a food service establishment. If such a product is so crucial to a food service establishment's reputation, then it is certainly worthwhile for food service employees to learn how to prepare quality bread products.

ACTIVITY 23-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

all-purpose flour ____________________

bloom ____________________

bread flour ____________________

budding ____________________

cool-rise method ____________________

double action baking powder ____________________

dough ____________________

dried yeast ____________________

drop batters ____________________

fresh yeast ____________________

hard wheat ____________________

kneaded ____________________

leavening agent ____________________

proof ____________________

proofing cabinet ____________________

roll-in process ____________________

self-rising flour ____________________

single-action baking powder ____________________

soft wheat ____________________

wash ____________________

white flour ____________________

Additional terms

____

____

____

____

____

715

ACTIVITY 23-2

DIRECTIONS: Test your knowledge of the various types of breads by completing the following activity. Place the letter of the best answer in the blank to the left of each item below.

_____ 1. Quick breads include
A. biscuits, doughnuts, and popovers.
B. coffee cakes, Danish pastries, and doughnuts.
C. cornbread, muffins, and waffles.
D. doughnuts, pancakes, and sweet rolls.

_____ 2. Sweetened yeast breads include
A. biscuits, doughnuts, and popovers.
B. coffee cakes, Danish pastries, and doughnuts.
C. cornbread, muffins, and waffles.
D. doughnuts, pancakes, and sweet rolls.

_____ 3. Pour batters are used to make
A. biscuits.
B. doughnuts.
C. muffins.
D. popovers.

_____ 4. Muffins are made from
A. drop batters.
B. hard doughs.
C. pour batters.
D. soft doughs.

_____ 5. The usual proportion of flour to liquid in soft doughs is
A. 1:1
B. 2:1
C. 3:1
D. 4:1

_____ 6. Quick breads are *not* leavened by
A. air.
B. baking powder.
C. steam.
D. yeast.

ACTIVITY 23-3

DIRECTIONS: Review factors related to breads. Read the statements and select the ingredient described in each. Place the number of the ingredient described in the right-hand corner of the box containing the letter that corresponds to the letter of the statement. If all of your answers are correct, the total of the numbers in all four rows and columns will be equal. Write this Total in the space provided.

INGREDIENTS

1. fermentation
2. leavener
3. sugar
4. chemical leaveners
5. water
6. eggs
7. flour
8. salt
9. baking powder
10. gluten
11. steam
12. air
13. fat
14. wheat
15. yeast
16. milk
17. flavorings
18. baking soda

A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P

Total ______

STATEMENTS

A. Substance which makes a baked product rise so it is light in proportion to its size.

B. Ingredient made from finely ground grain; it contains protein to form the structure or body of the bread.

C. Substance that reacts with acid to leaven some quick breads.

D. Leavener which expands when heated; it can be incorporated into a product by beating it.

E. Ingredient which strengthens gluten and improves the texture, color, and keeping quality of bread.

F. A liquid used in making bread; it makes the texture of the bread coarse and chewy.

G. The leavener used for making popovers.

H. Leavener used in making yeast breads; it may be purchased in fresh or dry form.

I. Ingredient which contributes flavor, tenderness, and richness to breads; it helps the product brown and adds to its keeping quality.

J. Ingredients which add flavor, aroma, and color to breads.

K. Ingredient which aids in leavening and binds all the ingredients together.

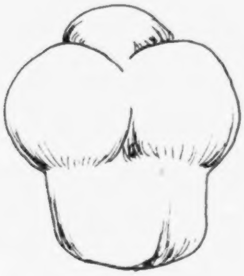
L. Ingredient which speeds the action of yeast and helps baked products stay fresh longer.

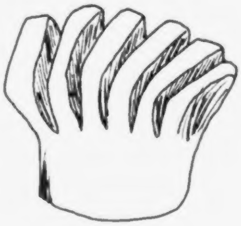
M. A liquid used in making bread; it adds flavor and nutrients and improves the color and texture of bread.

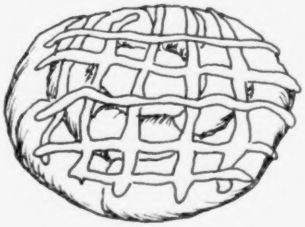
N. Substance formed from the protein in flour; the elastic framework that stretches and holds the gas bubbles formed by the leavening as the batter or dough rises.

O. Chemicals which react with moisture and heat to form the gas, carbon dioxide; they are used in quick breads.

P. Chemical leavener consisting of a baking soda, acid salt and starch mixture; the most common leavening agent for quick breads.







ACTIVITY 23-4

DIRECTIONS: In the space provided, list three breads or bread products that are popular for each of the following:

Breakfast: ______________________________

____

____

Lunch or Dinner ______________________________

____

____

Dessert ______________________________

____

____

ACTIVITY 23-5

DIRECTIONS: Unscramble the words in the left-hand column to complete the sentences regarding the convenience bread products available and the procedures for serving, holding, and storing breads.

1. tsperasie	Convenience bread products include canned biscuits, rolls, and _ _ _ _ _ _ _ _ _.
2. mleimaroee	Most food service establishments purchased some or all of their breads from _ _ _ _ _ _ _ _ _ _ bakeries.
3. mwhatr	When placed on the table, breads and rolls should be covered with a napkin to retain their _ _ _ _ _ _.
4. setrmiou	To store cool bread, wrap it or place it in an air-tight _ _ _ _-_ _ _ _-proof container.
5. tgerfraieror	In warm weather, bread may be stored in the _ _ _ _ _ _-_ _ _ _ _ _ to retard spoilage by mold.
6. letsa	French toast, grilled sandwiches, stuffings, or bread puddings can be made from _ _ _ _ _ bread.

ACTIVITY 23-6

DIRECTIONS: In the blanks provided, answer the following questions regarding preparation procedures for breads.

1. List three desirable characteristics for each of the following quick breads:

   Muffins

   Waffles/ pancakes

   Popovers

   Biscuits

2. Summarize the steps involved in each of the following methods for mixing quick breads:

   Muffin method

   Biscuit method

   Cake method

3. Name the method of mixing which should be used for each of the following quick breads:

   Popovers:

   Coffeecake:

   Pancakes:

   Biscuits:

   Nut loaves:

4. List the ten basic steps involved in making yeast bread:

5. Describe the desirable characteristics of yeast breads for each category below:

Appearance: ____________________

____

Crust: ____________________

____

Grain: ____________________

____

6. Explain the basic differences in the straight-dough, sponge-dough, and batter methods of making yeast breads: ____________________

____

____

____

7. Summarize the procedures for shaping each of the following yeast products:

Plain loaf: ____________________

____

Braided loaf: ____________________

____

Plain rolls: ____________________

____

Cinnamon rolls: ____________________

____

Danish pastries: ____________________

____

8. In what ways are sweet yeast breads prepared differently than other yeast breads?

____

____

____

____

____

24 Chapter Twenty-four
Desserts and Cookies

COMPETENCIES TO DEVELOP

- Prepare fruit desserts and fried desserts.
- Prepare puddings, custards, souffles, gelatin desserts, and frozen desserts.
- Make cookies, cakes, pies, pastries, and meringues.

OBJECTIVES TO ACHIEVE

- Name the types of desserts served in food service establishments.
- Identify convenience desserts used in food service.
- Summarize the techniques for preparing a variety of desserts.
- Describe procedures for serving and garnishing desserts.
- Outline procedures for holding and storing desserts.
- Identify the basic types of cookies.
- Summarize techniques for preparing the basic types of cookies.
- Summarize techniques for coloring, icing, and garnishing cookies.
- Identify menu uses of cookies.
- Describe procedures for serving cookies.
- Outline procedures for holding and storing cookies.

Many people feel that a meal without a dessert is like a sentence without a period–unfinished. Foods used for desserts are usually sweet, and the possibilities are unlimited. This chapter will introduce you to some common desserts served in food service establishments.

ACTIVITY 24-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

a la mode
Bavarian cream
betty
bloom
cobbler
flan
floating island
fruit fritter
fruit whip
ice cream pie
ice milk
parfait
peach melba
scalded
simple syrup
snow
Spanish cream
sundae

Additional terms

ACTIVITY 24-2

DIRECTIONS: Identify the types of desserts served in food service establishments by matching the description of the dessert with the appropriate dessert. Place the letter of the dessert description in the blank to the left of the dessert.

FRUIT DESSERTS

____ 1. Crisps

____ 2. Dumplings

____ 3. Fruit compote

____ 4. Fruit turnovers

____ 5. Shortcakes

DESCRIPTIONS

A. Dried fruits cooked in a simple syrup.

B. Fruit fillings topped with a mixture of flour, nuts, sugar, and shortening and baked.

C. Sweetened fresh fruit spread between layers of sweet biscuits, angel food cake, or sponge cake.

D. Fruit filling topped with sweetened biscuit or pie dough and baked.

E. Baked squares of pie or biscuit dough filled with sweetened fruit.

F. Folded squares of pastry filled with sweetened fruit.

GELATIN DESSERTS

____ 6. Charlotte

____ 7. Gelatin creams

____ 8. Gelatin whips

____ 9. Mousse

____10. Sponges

DESCRIPTIONS

A. Smooth, velvety desserts which use a hot pudding or soft custard as the liquid for dissolving the gelatin.

B. Gelatins to which beaten egg whites are added.

C. Gelatins which have been beaten to the consistency of whipped cream, and then chilled until set.

D. Cherry flavored Bavarian cream which may be molded with ladyfingers or sponge cake.

E. A gelatin cream to which whipped cream is folded in when the custard base is partially set.

F. A frozen Bavarian cream.

MILK DESSERTS

_____11. Baked souffle

_____12. Custards

_____13. Puddings

_____14. Soft custard

_____15. Triffle

DESCRIPTIONS

A. Milk desserts thickened with starch.
B. Milk desserts made by pouring soft custard over cake spread with jam.
C. A light puffy milk dessert leavened by beaten egg whites.
D. Milk desserts simmered over hot water or stirred constantly over low heat.
E. Milk dessert thickened with eggs.
F. Milk dessert baked in oven until it sets or gels.

FROZEN DESSERTS

_____16. Baked Alaska

_____17. Ice cream

_____18. Ices

_____19. Mousse

_____20. Sherbets

DESCRIPTIONS

A. Frozen dessert made from milk and sugar.
B. Frozen dessert made with sweetened fruit juices and milk.
C. Very rich dessert made with sweetened whipped cream and flavoring.
D. Frozen desserts made from sweetened fruit juices.
E. Rich frozen dessert made by pouring a sugar syrup like butterscotch or raspberry syrup over beaten egg yolks or egg whites.
F. Brick of ice cream encased in sponge cake and iced with a soft meringue sprinkled with slivered almonds.

ACTIVITY 24-3

DIRECTIONS: To review the information about convenience desserts, answer the following questions. Write your answers in the space provided.

1. What convenience dessert products are available to food service establishments? ______________________________

2. Summarize the preparation procedures for each of the following desserts:

   Baked apples: ______________________________

   Gelatin dessert using flavored gelatin and fresh fruits:

   Pudding made on top of the range:

   Baked Custard:

3. Where should an ice cream scoop be kept between uses and why?

ACTIVITY 24-4

DIRECTIONS: From the list below, choose a garnish or an accompaniment that would be appropriately served with each dessert in items 1-9.

GARNISHES AND ACCOMPANIMENTS

caramel
chocolate shavings
chopped nuts
crushed pineapple
dessert sauce
fresh fruit
fruit sauce
fruit topping
whipped cream
hard sauce
ice cream
meringue
soft custard

DESSERTS

1. Custards
2. Fruit desserts
3. Fruit gelatins
4. Frozen desserts
5. Gelatin creams
6. Gelatin souffles
7. Gelatin whips
8. Puddings
9. Souffles

ACTIVITY 24-5

DIRECTIONS: In the space provided, answer the following questions regarding the procedures for holding and storing desserts.

1. Why are gelatin desserts usually prepared the night before they are to be served?
2. Why do gelatin desserts need to be covered while in a refrigerator?
3. How should puddings and custards containing eggs be stored until serving time?
4. At what temperature should ice cream be kept during prolonged storage?
5. At what temperature should ice cream needed for immediate service be kept?

ACTIVITY 24-6

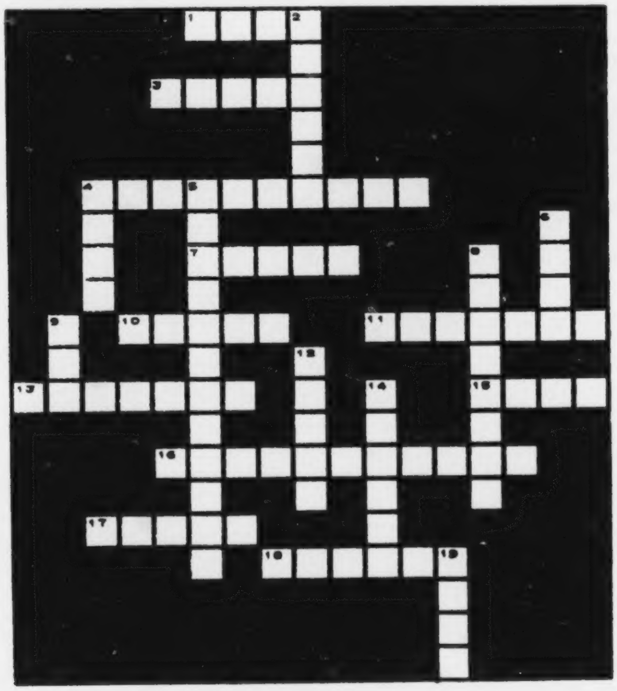
DIRECTIONS: For each type of cookie in the chart below, name the kind of dough required and summarize the way in which the cookie is formed.

TYPE COOKIE	KIND OF DOUGH	HOW COOKIE IS FORMED
Bar		
Drop		
Rolled		
Refrigerator		
Pressed		
Molded		

ACTIVITY 24-7

DIRECTIONS: Fill in the crossword puzzle using the missing words from the clues related to the procedures for mixing, preparing, baking, and decorating cookies.

COOKIE PREPARATION



ACROSS CLUES

1. The __________ method of mixing is best for macaroons and other cookies which use eggs as the main leavener.
3. The creaming method of mixing is used for __________ doughs.
4. A high proportion of __________ is needed for stiff dough.
7. Cookies are made from __________, salt, leavener, sugar, shortening, eggs and liquid.
10. Rolled cookies may be brushed with a very light __________ made of confectioners sugar and water.
11. Rolled cookies may be spread with an __________ and sprinkled with chopped nuts or colored sugars.
13. Drop cookies are dropped about two inches apart on a __________ baking sheet.
15. Doughs with more __________ produce chewy cookies.

DOWN CLUES

2. The __________ method of mixing is used to make soft and semi-soft doughs.
4. __________ dough contains more eggs and sugar than other types of cookies.
5. Stiff doughs must be __________ before they are prepared for baking.
6. Cookies with less sugar and shortening spread __________ than ones with a rich dough.
8. Bar cookies may be sprinkled or rolled in __________ sugar while warm.
9. __________ cookies are baked at 325°F for about 30 minutes.
12. A high ratio of __________ to shortening produces a crisp cookie.
14. __________, pressed, and molded cookies are baked about 400°F for 8-10 minutes until lightly browned.
19. Most __________ cookies are baked at 375°F for 10-15 minutes until light brown.

16. Rolled cookie dough is rolled out on a lightly floured board or __________ and cut into desired shapes.
17. Dough for refrigerator cookies is formed into long rolls and wrapped in __________ paper before refrigerating.
18. Dough for __________ cookies is pressed through a cookie press or pastry bag onto a greased baking sheet.

ACTIVITY 24-8

DIRECTIONS: To review the menu uses of cookies and the procedures for serving, holding, and storing cookies, complete the following activity. For each statement that you agree with, put an X in the blank labeled "agree." For each statement that you disagree with, put an X in the blank labeled "disagree." Then write a one-sentence statement defending your answer in the space below each statement.

1. Cookies are popular finger foods for receptions, teas, or parties.

_____ agree _____ disagree

____

____

2. Cookies may be served alone as a dessert or as an accompaniment to another dessert.

_____ agree _____ disagree

____

____

3. Most food service establishments prepare their cookies from scratch.

_____ agree _____ disagree

____

____

4. Most cookies should be served cold.

_____ agree _____ disagree

____

____

5. Cookies should be served on small, doily-lined plates.

_____ agree _____ disagree

____

____

25

Chapter Twenty-five
Cakes and Icings

COMPETENCIES TO DEVELOP

- Make cookies, cakes, pies, pastries, and meringues.
- Prepare and use icings, frostings, and fillings.

OBJECTIVES TO ACHIEVE

- Identify the types of cakes and their characteristics.
- Describe menu uses of cakes.
- Describe convenience cake products.
- Describe procedures for preparing cakes.
- Summarize procedures for cooling and storing cakes.
- Identify the types of icings, frostings, and fillings.
- Describe procedures for preparing icings, frostings, and fillings.
- Describe techniques for decorating cakes.
- Describe procedures for cutting and serving cakes.

Cakes are moist, tender, sweet, baked desserts. They are among the most popular desserts on food service menus. Many different kinds of cakes are possible by varying their basic ingredients. A variety of frostings, fillings, and icings may be used to decorate cakes. It takes practice and patience to become skilled in baking and decorating cakes. This chapter will help you improve your baking and decorating skills.

ACTIVITY 25-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

baking ______________________________

blending method ______________________________

conventional methods ______________________________

cooling ______________________________

creaming ______________________________

decorator's bag ______________________________

egg foam ______________________________

fillings ______________________________

frosting ______________________________

high-ratio shortening ______________________________

icings ______________________________

marzipan ______________________________

mixing ______________________________

modeling ______________________________

molding ______________________________

panning ______________________________

pastillage ______________________________

plain water icing ______________________________

royal icing ______________________________

simple icings ______________________________

storage ______________________________

Additional terms

____

____

____

____

____

ACTIVITY 25-2

DIRECTIONS: Answer the following questions regarding the types of cakes, menu uses of cakes, and convenience cake products available. Write your answers in the space provided.

1. What are the differences in shortened cakes and foam cakes?

2. Name and describe three types of foam cakes:

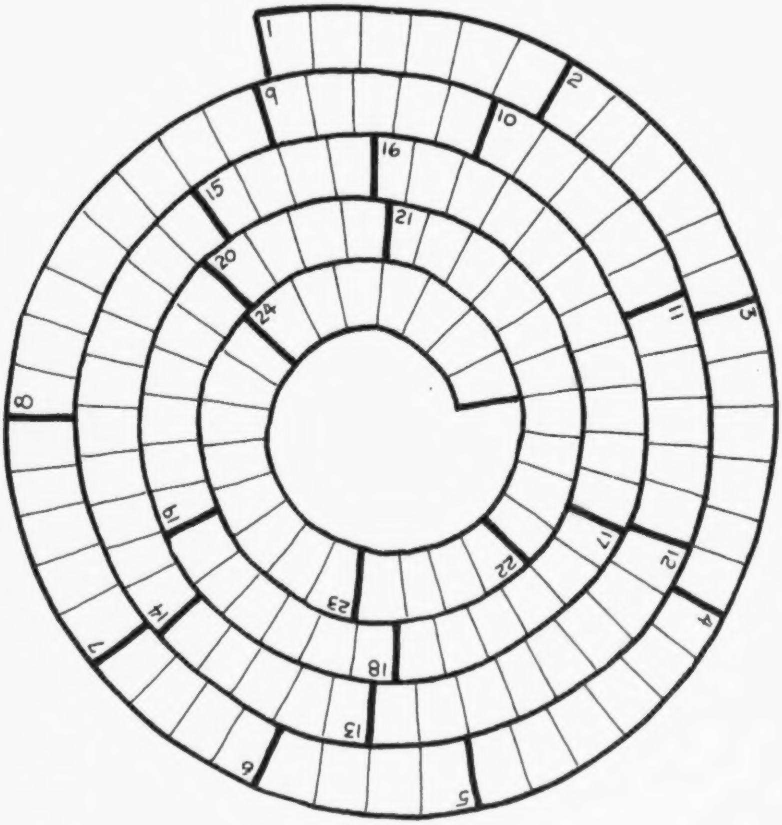
3. Describe three menu uses of cakes:

4. What convenience cake products are available to food service establishments?

5. What ingredients are combined in a master cake mix?

ACTIVITY 25-3

DIRECTIONS: To review the ingredients used in cake preparation, complete the following activity. Read each statement below the puzzle. Then, write the missing word by the corresponding item number in the spiral puzzle.



1. Cake flour has a lower ____________________ content then all-purpose flour.
2. Too much flour results in a tough cake that ____________________ during baking.
3. A fine sugar produces a cake with more ____________________ than regular granulated sugar.
4. A high-ratio shortening produces a sweeter, more tender, and more finely grained cake than ____________________ or margarine.
5. Too much shortening weakens the gluten structure and will cause a cake to ________________.
6. ____________________ improve the color and the texture of the cake.
7. Too much ____________________ can weaken the gluten structure resulting in a heavy, coarse-textured cake that may fall.

8. The liquid provides the ____________________ needed to develop the gluten.

9. Too much liquid results in a heavy, ____________________ cake.

10. Using too few eggs will result in a cake of reduced coarse texture, and poor ____________________ life.

11. Too little liquid causes the cake to be ____________________.

12. The ____________________ causes the cake to rise and become light and porous.

13. Too little ____________________ may cause the cake to fall.

14. ____________________ improves the texture, tenderness, and keeping quality of cakes.

15. ____________________ flour produces larger, more velvety, more delicate cakes than all-purpose flour.

16. All ____________________ for cakes should be at room temperature when the cake is mixed.

17. Too ____________________ sugar results in a tough cake with reduced shelf life.

18. Eggs provide the leavening in ____________________ cakes.

19. Too much leavener results in a ____________________, uneven grained cake of poor quality and flavor.

20. The liquid used in cakes is usually ____________________.

21. Baking soda is used with an acid like ____________________ to leaven some cakes.

22. Too little leavener results in a ____________________, dense cake.

23. Standardized cake recipes are sometimes called ____________________.

24. Even small variations in the ingredients can affect the ____________________ of the cake.

ACTIVITY 25-4 **DIRECTIONS**: Respond to the following case situations by writing your answers in the space provided.

CASE SITUATION #1

Phil is a food service employee with the responsibility of preparing shortened cakes. He does not know which method of mixing to use. Please give Phil some assistance by naming the two methods which can be used for mixing shortened cakes and by describing the procedure for each.

METHOD	PROCEDURE

CASE SITUATION #2

Angela is responsible for preparing the foam cakes in her food service establishment. She needs to make an angel food cake, a sponge cake, and a chiffon cake. Angela does not know which method to use for mixing her foam cakes. Please help her by describing the preferred mixing procedure for each foam cake listed below.

FOAM CAKE	PROCEDURE
Angel Food	
Sponge	
Chiffon	

CASE SITUATION #3

Now that Phil and Angela have mixed their cakes, they are both anxious to bake them. However, they must first prepare the pans and fill them with the cake batter. The guidelines for choosing appropriate pans, preparing them, and filling them vary for shortened cakes and foam cakes. Therefore, Phil and Angela will not be able to follow the same guidelines. Please assist them by reminding Phil of the panning procedures for shortened cakes and by reminding Angela of the panning procedures for foam cakes.

Shortened cakes: ______________________________

Foam cakes: ______________________________

CASE SITUATION #4

Since all of Phil's cakes are shortened cakes, he is going to bake them together in the oven. He needs your advice as to how to arrange the pans inside the conventional oven. (He will be baking three round cakes in an oven with two racks.)

CASE SITUATION #5

Angela's cakes are almost finished baking, but she is worried that she will not be able to tell if they are done. Please describe four ways in which Angela can test her cakes for doneness:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

CASE SITUATION #6

Phil and Angela's final steps include removing the cakes from their pans and storing the cakes. Please help them with these final steps by explaining the procedures for removing both shortened cakes and foam cakes from their pans and the procedure for storing both. (These cakes will *not* be frosted immediately).

ACTIVITY 25-5

DIRECTIONS: To review the types of frostings and icings, complete the following activity. In the blank to the left of each frosting or icing, place the letter of the statement which best describes it.

FROSTINGS AND ICINGS	DESCRIPTIONS
______ 1. Boiled frosting	A. Smooth and stiff mixture made with eggwhites, shortening, and powdered sugar.
______ 2. Cooked icings	B. Thin, sweet syrup or sauce used as a coating.
______ 3. Creamed frosting	C. Thin, pourable mixtures of powdered sugar, liquid, and flavoring.
______ 4. Decorator's frosting	D. Made by creaming shortening, powdered sugar, and flavoring together.
______ 5. Fondant	E. Made from a commercial fondant base in most food service establishments.
______ 6. Glaze	F. Involves dissolving large amounts of sugar in hot liquid and cooking the syrup to a specified temperature or stage.
______ 7. Uncooked icings	G. Sweet, moist mixtures spread between the layers of cake to hold the layers together.
	H. Pure white icing made from a sugar water mixture boiled with cream of tartar.

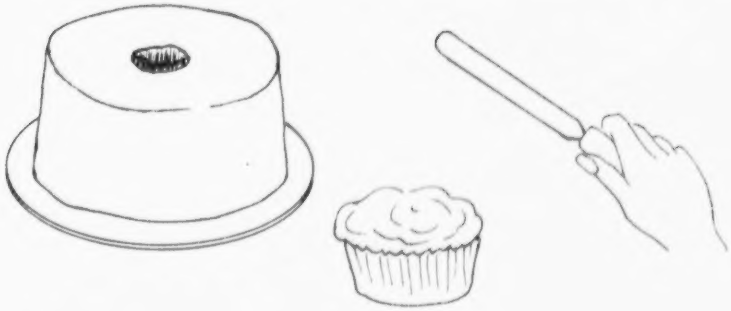
ACTIVITY 25-6 **DIRECTIONS**: In the space provided, describe the procedure for frosting each of the following types of cakes.

Sheet cakes: ______________________________

Cupcakes: ______________________________

Layer cakes: ______________________________

Tube cakes: ______________________________

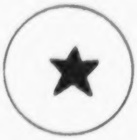


ACTIVITY 25-7

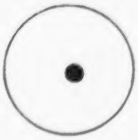
DIRECTIONS: Place the letter of the decorating tube in the blank to the left of each design.

DESIGN

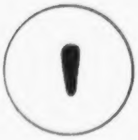
______1.



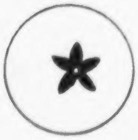
______2.



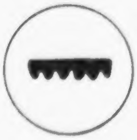
______3.



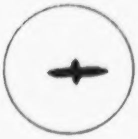
______4.



______5.



______6.

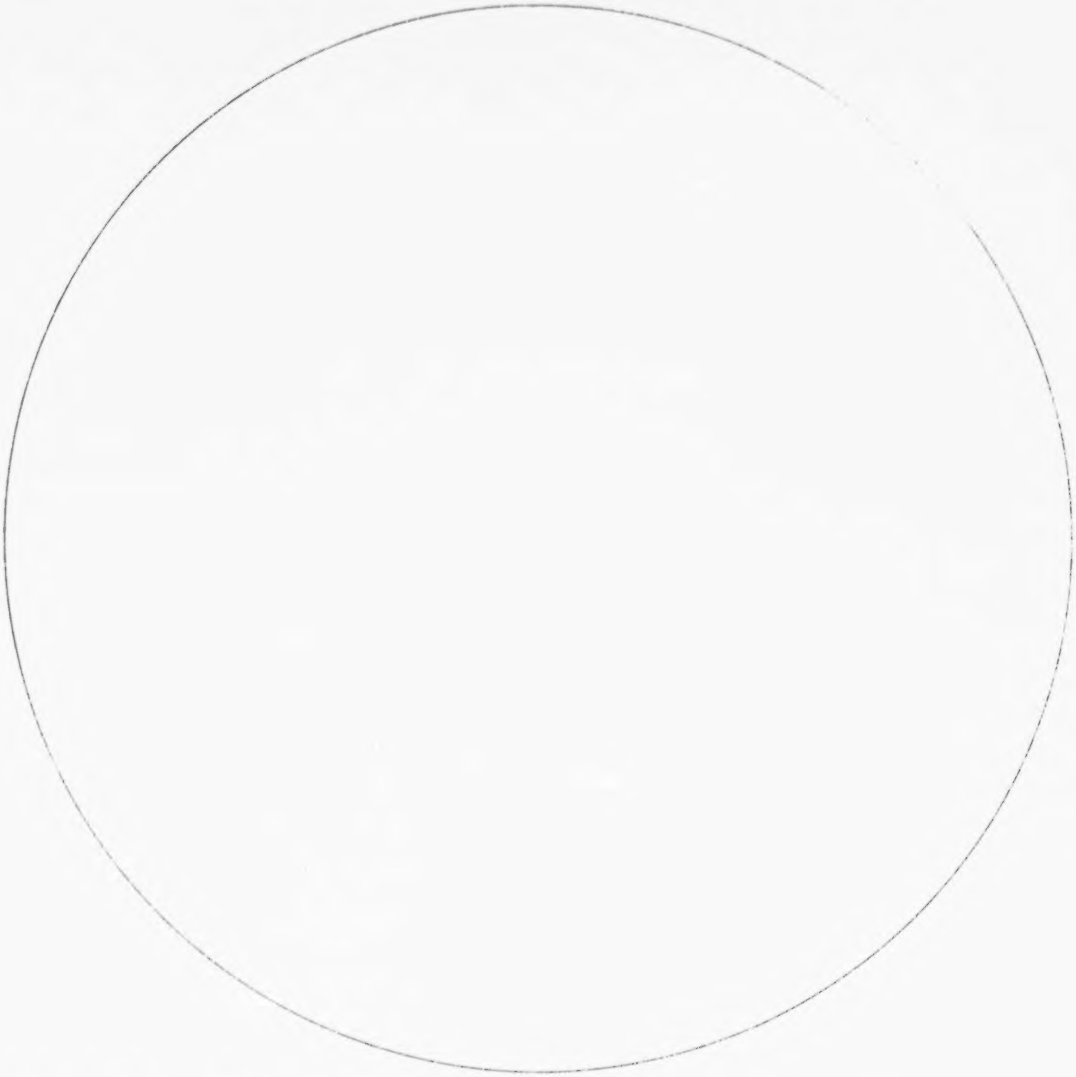


DECORATING TUBE

A. Basket weave tube
B. Drop flower tube
C. Leaf tube
D. Petal or rose tube
E. Plain or round tube
F. Star tube

ACTIVITY 25-8

DIRECTIONS: Improve your cake decorating skills by completing the following activity. Draw a six inch circle or trace the circle illustrated on this page. Cut the circle out. Create an eight point star by folding the circle according to the steps studied in the *Food Service* text. In the space provided below the pattern describe how you might use the paper pattern for a piping design when decorating cakes, and write a description of the pattern's use. (**NOTE**: With the proper tools and ingredients, the pattern can be used when decorating cakes in lab).



Suggested Use for Pattern When Piping Design on Cake: ______________________________

____

____

____

____

ACTIVITY 25-9

DIRECTIONS: Improve your cake decorating skills by completing the following activity. Draw a six-inch square or trace the square illustrated on this page. Cut the square out. Create a simple wave pattern design by following the steps studied in the *Food Service* text. In the space provided below the pattern describe how you might use the paper pattern for a piping design when decorating cakes and write a description of the pattern's use.

Suggested Use for Pattern When Piping Design on Cake: ______________________________

ACTIVITY 25-10 **DIRECTIONS**: In the space provided, answer the following questions related to cake decorating techniques, cutting, and serving procedures.

1. Name and describe two types of paste used for molding and modeling cake decorations:

a) ______

b) ______

2. Summarize the procedures that should be followed when using each of the pastes identified in item #1.

a) ______

b) ______

3. What is meant by "run-out work"? ______

4. List the four types of lettering used in icing cakes:

a) ______

b) ______

c) ______

d) ______

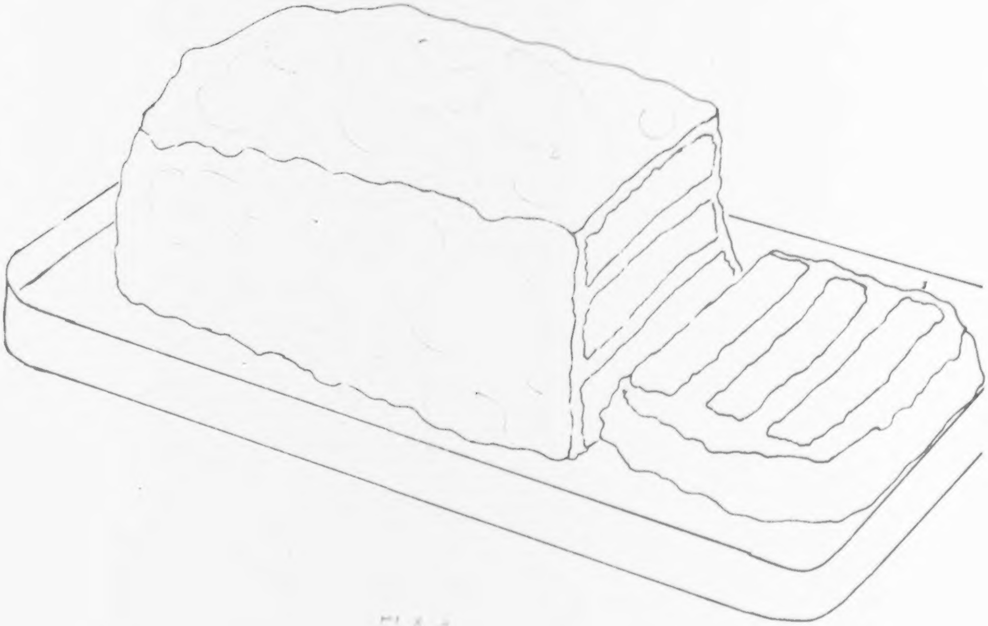
5. Describe the appropriate consistency of icing used for lettering:

6. When cutting and serving cakes, what factors determine the shape and size of the servings?

7. What shapes should round cakes be cut into?

8. What shapes should rectangular cakes be cut into?

9. What tool should be used for cutting angel food cakes and sponge cakes?



26 Chapter Twenty-six
Pastry and Pies

COMPETENCY TO DEVELOP

- Make cookies, cakes, pies, pastries, and meringues.

OBJECTIVES TO ACHIEVE

- Identify the kinds of pastry products.
- Summarize menu uses of pastry products.
- Identify convenience pastry products.
- Identify the types of pastry dough.
- Describe procedures for preparing pastry dough.
- Identify the types of pastry filling.
- Describe procedures for preparing pastry fillings.
- Identify the types of pastry toppings.
- Describe procedures for preparing pastry toppings.
- Summarize the holding and storage of pastry products.
- Outline procedures for garnishing and serving pastry products.

The term pastry is used to refer to a large variety of baked products made from doughs rich in fat. Pastries often have fillings and toppings, but they get their name from the crust, or *pastry*, used to make them. Pastries include cream puffs, puff pastry, tarts, and turnovers as well as the favorite pies.

ACTIVITY 26-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

a la mode ____

chiffon filling ____

crimp ____

crimper ____

dock ____

double panning ____

mealy crust ____

meringue ____

one-crust pie ____

pie press ____

vents ____

wash ____

waxy maize ____

Additional terms

____

____

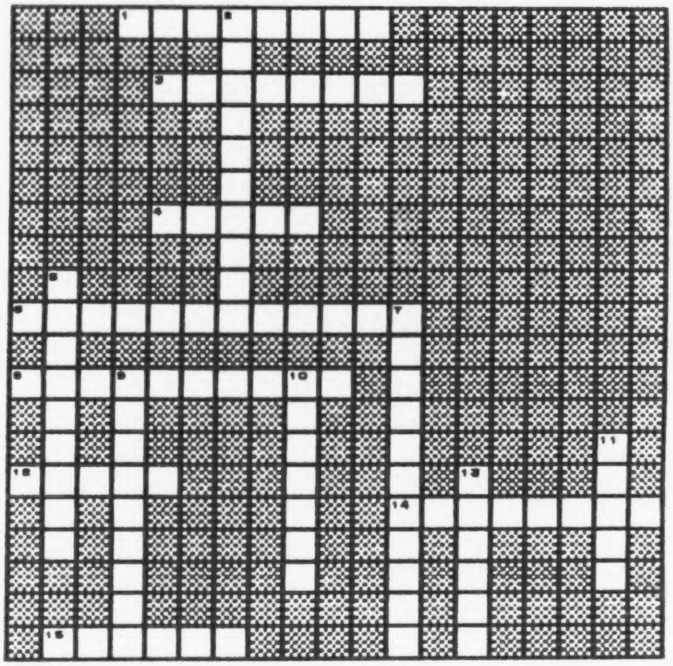
____

____

____

ACTIVITY 26-2 **DIRECTIONS**: Complete the following crossword puzzle to review the various kinds of pastry products.

PASTRIES



ACROSS CLUES

1. Type of pie made with two layers of pie dough—one lining the pie plate and one covering the filling.
3. Type of pie made with a single crust on top rather than on the bottom.
4. Type of pie including apple, blueberry, peach and cherry.
6. Pastry product used as a base for a variety of creamed dishes.
8. Type of pie including lemon meringue, chocolate cream, strawberry chiffon, custard, and pumpkin.
12. Very delicate pastry product filled with a thick cream or fruit filling.
14. Deep-fried doughnuts which are lightly dusted with a fine powdered sugar.
15. A large variety of baked products made from doughs rich in fat.

DOWN CLUES

2. Light, round shells of pastry usually filled with a cream filling or sweetened whipped cream.
5. Pastries used for cream-filled desserts.
7. Type of pie made with one thin layer of rolled pie dough.
9. Small, usually triangular, baked pastry with a sweet savory filling.
10. Oblong, hollow pastries filled with a cream filling or whipped cream and covered with chocolate icing.
11. Small, single-serving pies with one or two crusts.
13. An egg pie made in a single crust bottom.

ACTIVITY 26-3

DIRECTIONS: Identify the menu uses of pastries by listing at least two examples of pastry products appropriate for each of the following menu items.

MAIN DISHES	APPETIZERS	DESSERTS
______________	______________	______________
______________	______________	______________

ACTIVITY 26-4

DIRECTIONS: Identify the convenience pastry products available to food service establishments by listing three in the space provided.

____

____

____

ACTIVITY 26-5

DIRECTIONS: To reveal the three types of pastry dough, unscramble the words in items 1-3. Then write an accurate description of each type on the solid lines.

1. epi srteu   __ __ __   __ __ __ __ __

____

____

____

2. xohuc tpsae   __ __ __ __ __   __ __ __ __ __

____

____

____

3. fpfu eptsa   __ __ __ __   __ __ __ __ __

____

____

____

ACTIVITY 26-6

DIRECTIONS: Review the functions of ingredients used in pastry preparation by completing the following word search. First read the statements following the puzzle and fill in the blanks with the word that best completes each sentence. If you have filled in the correct answers, you should be able to find each one in the puzzle. The words run across, up, down, backward, and diagonally. Circle each word you find.

WORD SEARCH–PASTRY INGREDIENTS

G O Z B T Z W E G G S I L X K Z Y W O U X K A C O V R G
O E U Z T M Q A H F P O P E U J A F H H I A A E I W O Z
J L H S O F N R H H D G T G P W C M F P A W Y M U Q Y U
R E I K A L F F O I O H E E Y J G X E R N E Z I X E Q T
M I J O H M D C C Z A S F P A J P V E W M M W L U X B N
N Q J A R K M K E G U X C M E Z P R A I A L A H C E L S
Z M J Q A J E O B F H V I F N S R S B B R C T K H L U Y
C Y K X Q V K W S Y J H Y F W A J O I R J L E G C B I K
D F T H Q P F U G Y G K D D E L N O J E L D R A U U D P
B Q H O P L D G B U O J R K X O P E R A F R U F C C U E
W W H H Q Q O T K U V G E N U F K P E D W M U N S C T Z
N H H N D K S L P O R F P R P D L I O F W Z I C P H Z A
A I K S S N D A E N E R Z Y W B R O J A H T F B U O G Z
W F V V Q M L B W M J W M S N V X T T D R S Q R A U Y M
X P I N Q X I I V Y J H I O P B H L O Q R N G W Y N D V
F U A L C G U Y J G U W M E G L R A U Z O S O O C H I Q
J I Y S F O D L O C R P I S N E I S G H B E C M D B U N
O W C S T Q N R Y X X G R F I F M T H C H F A G K J A R
K V P L F R R F M A E Y R F N E T V T S K L O Y H L Y F
H J G R V R Y A E N J A X N E G M K N I R H S U L B X W
B B Q Q O Q Y K V C G U X F T Z E M U F N X I C U T L A
B D R R K P A H J U T U Z C R Q R H A U V G O F X O X S
W R G T L Z U P S M A I L W O Y L S A R F K H Q U F M Z
U L T S P X Q T H Q S T O F H C W W B O J N K T N H Z Y
H W I E P E E J W G B H F N S W B A E O M R A T D K E V
Z V E P L R I F E R L U U O E F D C M G R E D N E T P J
J U H X T Q T J B L P O L L K R C F Y T S A K R D N L E
W Y H V B D H Q K K L R B N K L B G W J Z X A N J A V M

1. __ __ __ __ __ __ flour, a blend of cake flour and all-purpose flour, produces tender pie crusts with good color.

2. The liquid used to moisten the flour so the gluten can develop is __ __ __ __ __.

3. __ __ __ __ __ __ __ __ __ __ coats the particles of flour and separates the gluten strands thus making the pastry tender.

4. __ __ __ __ add color and flavor to rich pastries as well as provide leavening action.

5. In rich pie crusts and pastries, __ __ __ __ __ adds flavor and tenderness and helps brown the product.

6. A specially made margarine which is waxy and pliable is used for _ _ _ _ paste.

7. Too little water will make pie dough hard to handle and result in cracking and _ _ _ _ _-_ _ _ _.

8. _ _ _ _ _ _ _ _ _ _ _ _ sugar is used to coat some pastries like crullers.

9. _'_ _ _ adds flavor, helps control the gluten formation, and aids in browning.

10. Butter or margarine is used for _ _ _ _ _ paste.

11. _ _ _ _ _ flour with a high gluten content is used for making choux paste and puff paste.

12. The more shortening used the _ _ _ _ _ _ _ _ the crust.

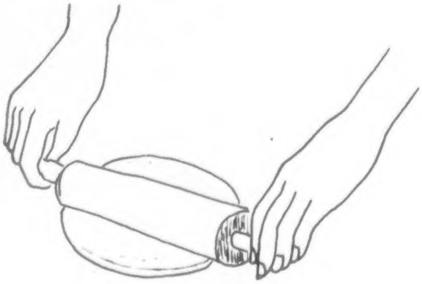
13. For pie crusts, the water must be _ _ _ _ to prevent the shortening from becoming oily and to slow the development of gluten.

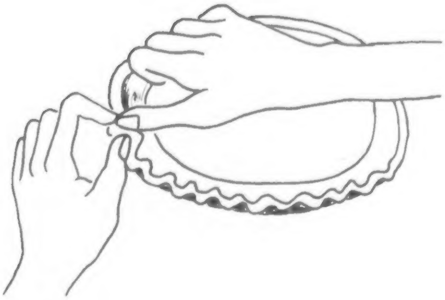
14. Fresh liquid eggs or egg _ _ _ _ _ are used for making puff paste.

15. Excess shortening weakens the gluten strands making the dough overly _ _ _ _ _ _.

16. Too much water will cause the pie crust to be tough, pale in color, and to _ _ _ _ _ _.

17. Too much flour results in a _ _ _ _ _ crust.





ACTIVITY 26-7

DIRECTIONS: In the space provided, answer the following questions regarding the procedures for preparing pies.

1. Describe the mixing procedure which will result in a flaky pie crust.

2. List the three steps involved in handling pie dough:

3. Following the three steps you identified in item #2, describe the procedure for preparing a one-crust pie with a fluted edge. (The crust will be baked before filling.)

4. What would you do differently if you were preparing a two-crust fruit pie?

5. Give the time and temperature for baking each of the following:

one-crust pie: ____________________

two-crust pie: ____________________

frozen pie: ____________________

ACTIVITY 26-8

DIRECTIONS: To complete this activity, you and your classmates will need to break up into groups of three or four. In groups, you will set up an "imaginary" assembly line for pie production. The groups with three people will describe the assembly line procedure for making one-crust pies, while the groups of four will describe the procedure for two-crust pies. In the space provided below, write the name of each group member and describe his or her duty in the assembly line in the proper sequence of order.

ASSEMBLY LINE #1 -- ONE-CRUST PIES

Step One Name: ______________________________

Duty: ______________________________

Step Two Name: ______________________________

Duty: ______________________________

Step Three Name: ______________________________

Duty: ______________________________

ASSEMBLY LINE #2 -- TWO-CRUST PIES

Step One Name: ______________________________

Duty: ______________________________

Step Two Name: ______________________________

Duty: ______________________________

Step Three Name: ______________________________

Duty: ______________________________

Step Four Name: ______________________________

Duty: ______________________________

ACTIVITY 26-9

DIRECTIONS: Match each type of filling below with its most accurate description by placing the letter of the description in the blank to the left of the fillings. All of the letters will be used, therefore, some blanks will have more than one answer.

TYPES OF FILLINGS

_____ 1. Chiffon

_____ 2. Cream

_____ 3. Custard

_____ 4. Fruit

_____ 5. Speciality

DESCRIPTIONS

A. Made with thickened milk and eggs.

B. Include apple, apricot, blackberry, cherry, peach, etc.

C. Made with ice cream.

D. Made with thickened fruit.

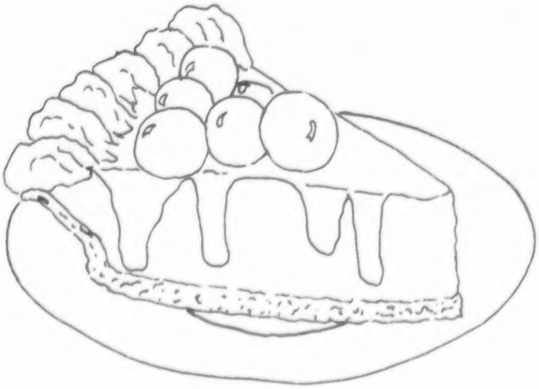
E. Include lemon, orange, strawberry and chocolate flavors.

F. Include banana, butterscotch, chocolate, coconut, and vanilla flavors.

G. Made with egg whites or whipped cream folded into a cream filling or fruit filling.

H. Made of milk and egg mixtures baked in a single pie crust.

I. Include pecan and pumpkin.



ACTIVITY 26-10

DIRECTIONS: Answer the following questions regarding the procedures for preparing pastry fillings and pastry toppings.

1. By what three methods are fruit fillings usually prepared in food service establishments?

2. Describe one of the methods you just listed in item #1:

3. Describe the correct method for preparing cream fillings:

4. Describe the correct method for preparing chiffon fillings:

5. Describe the correct method for preparing custard fillings:

6. List two popular toppings for pies:

7. Describe the procedure for preparing one of the toppings you just listed in item #6:

ACTIVITY 26-11

DIRECTIONS: Read each statement regarding the procedures for holding, storing, garnishing, and serving pastries and pies. If the statement is true, circle the letter T to the left of the sentence. If the statement is false, circle the letter F.

T F 1. Pastries with fillings containing eggs, milk, meat, poultry, or fish must be kept refrigerated.

T F 2. Most pastries taste best when served the day they are made.

T F 3. Rich pastries are usually served with garnishes.

T F 4. Fruit-filled pastries and pies may be topped with a slice of cheddar cheese.

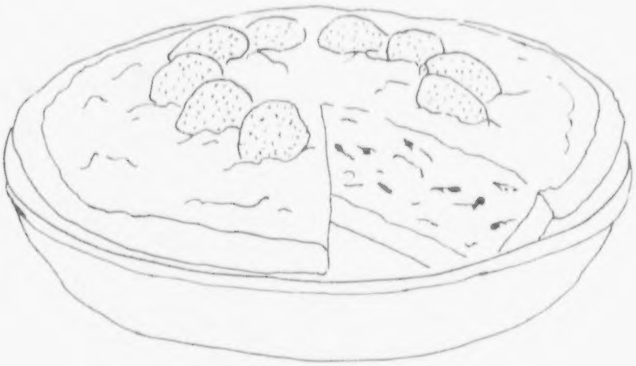
T F 5. Pastries with cream, chiffon, or custard fillings should be served warm.

T F 6. Chiffon and meringue-topped pies are usually served with garnishes.

T F 7. Custard pies are often topped with whipped cream.

T F 8. Fruit pies should be served cold.

T F 9. Deep dish pies may be served with a scoop of ice cream.



27

Chapter Twenty-seven
Basic Service Skills

COMPETENCIES TO DEVELOP

- Welcome guests and oversee customer comfort.
- Handle customer complaints.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.

OBJECTIVES TO ACHIEVE

- Identify personal skills needed by service personnel.
- Describe factors affecting customer responses.
- Identify types of customers and their characteristics.
- Describe customers who present special problems to service personnel.
- Outline ways to please customers.
- Summarize techniques for handling customer complaints.
- Describe menus used in food service.
- Identify types of promotional materials and displays used in food service.
- Outline salesmanship techniques effective in food service.
- Summarize methods for managing serving responsibilities.

Service personnel are responsible for dealing directly with the customer. They greet and seat the customer. They sell and serve the food. They receive the money for the sales, make accurate change, and keep records of the sales.

Service personnel must interact effectively with customers. To do so they must develop personal skills, an understanding of customers, merchandising skills, and the ability to manage their varied serving responsibilities.

ACTIVITY 27-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

a la carte

attitude

club breakfasts

expediter

gratuities

human relations

nonverbal communication

personality

sell up

table d'hote

Additional terms

ACTIVITY 27-2

DIRECTIONS: To identify personal skills needed by service personnel, complete the following check list. Read each question carefully. Place a check in the column which best describes your behavior in your food service establishment or classroom laboratory.

SELF-EVALUATION CHECK LIST FOR FOOD SERVICE EMPLOYEES

CHARACTERISTICS	MOST OF THE TIME	SOME-TIMES	SELDOM
1. **APPEARANCE**			
Do you start the day with a smile?			
Do you check your appearance before going to work?			
Do you check your clothing for rips, missing buttons, and sagging hems?			
Do you wear appropriate undergarments?			
Is the length of your skirt or pants appropriate?			
Does your clothing fit properly without being too tight or too loose?			
Is your hair clean and neatly arranged?			
Do you wear a hair net or cap when on duty?			
Females, is your makeup correctly applied in moderation on a clean face, rather than over old makeup?			
Are you clean shaven? (Males, is your beard or mustache, if you wear one, neatly trimmed?)			
Do you refrain from wearing jewelry, except for a watch and wedding ring?			

CHARACTERISTICS	MOST OF THE TIME	SOME-TIMES	SELDOM
Are your teeth clean and is your breath fresh?			
Are your hands clean and your nails neatly manicured?			
Do you use an effective deodorant?			
Do you refrain from using excessive cologne?			
Are your shoes clean, in good repair, and an appropriate style?			
Do you maintain proper posture when standing or walking?			
2. **COOPERATION**			
Do you observe and obey the rules and policies of the food service operation?			
Are you willing to do whatever job is assigned to you?			
Are you willing to do jobs or routine tasks not originally assigned to you?			
Can you make adjustments to changes and unexpected situations?			
Do you cooperate with your co-workers? Your supervisor?			
Have you gained the friendship and respect of those with whom you work?			
Do you respect the authority of those for whom you work?			
Are you willing to try to work with someone in spite of a personality conflict?			

CHARACTERISTICS	MOST OF THE TIME	SOMETIMES	SELDOM
3. **COURTESY**			
Are you pleasant while working?			
Are you always courteous, polite, and patient with fellow employees and your supervisor?			
Are you courteous, polite, and patient to customers, students, or others?			
Do you respect the desires, interests, and opinions of others?			
4. **COMMUNICATION**			
Do you speak in a pleasant manner and moderate tone?			
Do you have a reasonable command of the English language?			
Do you use good telephone manners?			
Do you take accurate messages?			
Do you listen carefully?			

Look at your answers on the self-evaluation check list and complete the following statements.

My strengths are ______________________________

____

My weaknesses are ______________________________

____

My plan for personal improvement includes ______________________________

____

____

____

____

____

ACTIVITY 27-3

DIRECTIONS: Write a paragraph describing factors which affect customer responses as to expectations and reasons for eating in food service establishments. Include in your paragraph the various reasons why people eat out in fast food establishments, restaurants, and commercial cafeterias.

ACTIVITY 27-4

DIRECTIONS: In the space provided, list five courteous gestures that you as a food service employee could exhibit to your customers.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________

ACTIVITY 27-5

DIRECTIONS: To identify ways to please customers who present special problems to service personnel, complete the following activity. Read each of the following problem situations below. Solve each problem by responding to the questions following each situation. Write your answers in the blanks provided.

PROBLEM #1

A gentleman dining alone calls you to his table after his food has been served. He ordered his steak well done and it was served medium rare. He is understandably displeased. The dining room has been very busy and you think he may have been given the wrong order. What should you do?

PROBLEM #2

It is late one evening. A large party has come for dinner. They talk loudly, laugh and seem to be disrupting the whole dining room. Guests at nearby tables seem annoyed. Should you ask them to be quiet? Why or why not? If not, what should you do?

PROBLEM #3

A blind woman has just arrived at the restaurant. You are responsible for both seating her and serving her. What adjustments do you need to make in order to accommodate her?

PROBLEM #4

An elderly gentleman has been seated near the kitchen and complains to you about the noise. He also tells you that he is on a restricted diet and cannot eat the type of eggs offered on the breakfast menu. How should you respond to these two problems?

PROBLEM #5

You are seating a couple with three small children. What type of area would be best for them? Also, what things do you need to consider while taking their order and serving them?

ACTIVITY 27-6

DIRECTIONS: As with the previous activity, this activity will help you outline ways to please customers who present special problems to service personnel. The problems presented in the following situations are different from those presented earlier. For the following situations which could be found in a seated service eating establishment, propose an effective way to deal with the situation. Write your solution to the problem in the space provided.

1. A customer is in a *hurry*

2. A customer is *intoxicated*

3. A customer is a *complainer*

4. A customer is *indecisive*

5. A customer is a *joker* or *overfamiliar guest*

6. A customer is in a *wheelchair*

763

ACTIVITY 27-7

DIRECTIONS: Answer the following questions regarding menus and other promotional material used in food service.

1. Describe public relations techniques used by service personnel to promote a food service establishment:

____

____

____

2. How is the menu used as a merchandising tool?

____

____

____

3. What should service personnel know about the menu?

____

____

____

4. Name and describe the two basic types of menus used in restaurants:

____

____

____

____

____

____

5. What food items are usually included in each of the following menus?

BREAKFAST MENU ____________________________

____

LUNCHEON MENU ____________________________

____

DINNER MENU ______________________________

____

ACTIVITY 27-8

DIRECTIONS: The next three activities will help you improve your salesmanship abilities by allowing you to practice suggestive selling. For this activity, put the letter of the food item which best answers the question in the blank to the left of the question.

______ 1. Which of the following would you suggest for a tired, chilled guest?

A. Salad plate

B. Vegetable stew

______ 2. Which of the following would you suggest for a guest who is on a fat-restricted diet?

A. Deep fried fish

B. Lean, broiled fish

______ 3. Which of the following would you suggest for a dieter?

A. Pizza

B. Salad plate

______ 4. Which of the following would you suggest for a person who is on an egg-restricted diet?

A. French dressing

B. Mayonnaise

______ 5. Which of the following would you suggest for an office worker?

A. Meat, potatoes, and gravy

B. Soup and sandwich

______ 6. Which of the following would you suggest for a person who is on a sugar-restricted diet?

A. Cake

B. Fresh fruit compote

ACTIVTIY 27-9

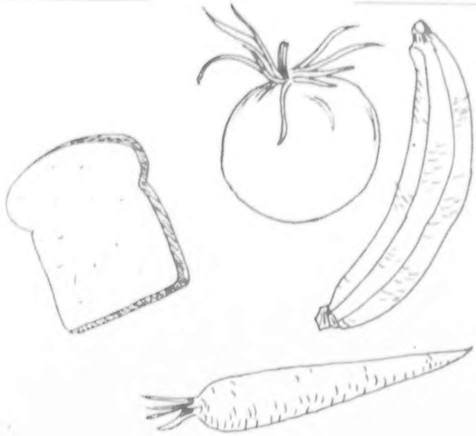
DIRECTIONS: Select appropriate complements for specific food items by completing the matching exercise. Match each complement with a food item. Place the letter of the complement in the blank to the left of the food item. Use each letter only once.

FOOD	COMPLEMENT
_____ 1. Toast	A. Milk
_____ 2. Hamburger	B. Soup or salad
_____ 3. Sandwich	C. Garlic bread and salad
_____ 4. Spaghetti	D. Orange juice
_____ 5. Steak	E. Fries and a soft drink
_____ 6. Sweet roll	F. Baked potato

ACTIVITY 27-10

DIRECTIONS: For each food item listed below, write four colorful adjectives describing the food. Remember to use adjectives that will increase a customer's appetite for the food item. One example for each category has been provided for you.

• FRUITS	lucious	• BREAD	hot
	_____________		_____________
	_____________		_____________
	_____________		_____________
• VEGETABLES	crisp	• CAKE	tender
	_____________		_____________
	_____________		_____________
	_____________		_____________



ACTIVITY 27-11

DIRECTIONS: In the blanks provided, answer the questions regarding the management of service responsibilities.

1. What organization tips can you list that would help service personnel save time and energy?

2. Describe the proper procedure for loading and carrying trays:

3. Why is it important for service personnel to be organized?

4. In what ways can service personnel help reduce costs in the food service establishment?

5. In what ways can service personnel help control cash in the food service establishment?

767

28

Chapter Twenty-eight
Sidework

COMPETENCIES TO DEVELOP

- Perform opening, closing, and sidework duties.
- Sort, count, and store utensils at designated places.
- Clear items from tables, and remove soiled items from tables and stations.

OBJECTIVES TO ACHIEVE

- Identify persons responsible for opening, closing, and sidework.
- Identify opening, closing, and sidework duties.
- Describe procedures for performing work area duties.

The overall responsibility for attending the dining room usually belongs to the headwaiter, the captain, the hostess, or a manager. In some food service establishments, the work of cleaning, preparation, and maintenance of the dining room may be divided equally and rotated among all service personnel. In other establishments, a single individual may be responsible for each area of the dining room. Regardless of who holds the major responsibility for attending the dining room, all food service personnel need to be aware of the sidework duties that must be carried out in any food service establishment.

ACTIVITY 28-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

booster stand ____

closing duties ____

fountain specialities ____

opening duties ____

portion packs ____

service stand ____

side stand ____

work station ____

Additional terms

____

____

____

____

____

ACTIVITY 28-2

DIRECTIONS: Answer the following questions regarding duties performed before, during, and after serving hours.

1. What is the meaning of the word "sidework"?

2. What duties are typically labeled as "closing duties"?

3. What duties are typically labeled as "opening duties"?

4. Which duties are usually performed during serving hours?

ACTIVITY 28-3

DIRECTIONS: Complete the following activity to identify the four major sidework duties performed by food service personnel. First, fill in the blank(s) in each word below with the missing vowels. Then, unscramble the words to create a meaningful word order. Write your new word order on the solid lines. If you supply the appropriate vowels and determine the correct word order, your answers will reveal the four major sidework duties.

1. t__bl__s r__s__tt__ng __nd s__tt__ng

2. r__ __m th__ d__n__ng cl__ __ n__ng

3. __nd p__l__sh__ng s__rv__c__w__r__ cl__ __n__ng __nsp__ct__ng

4. st__nds m__n__g__ng s__rv__c__

ACTIVITY 28-4

DIRECTIONS: Respond to the following case situations regarding the procedures for performing the four major sidework duties identified in the preceding activity. Write your response in the space provided.

CASE SITUATION #1

Juanita is responsible for inspecting, cleaning, and polishing the serviceware in her food service establishment. Juanita has recently started to question the necessity of this duty. Please remind her of the procedures for inspecting, cleaning, and polishing serviceware and the importance of effectively carrying out these procedures.

CASE SITUATION #2

Jake, a food service employee, is responsible for setting and resetting tables. He is feeling very frustrated because he cannot seem to keep enough tables for in-coming guests. Please give Jake some assistance by reviewing the procedures he should follow when setting and resetting tables. Also give him some tips on how to work quickly.

CASE SITUATION #3

You are a food service manager in the process of training a new employee. You have assigned the responsibility of cleaning the dining room to this new employee. List and describe all of the duties the employee will be responsible for while cleaning the dining room.

CASE SITUATION #4

Ann Marie is responsible for managing the service stand in the restaurant where she is employed. Ann Marie has a habit of forgetting to restock the supplies in the service stand. Make a list for Ann Marie, helping her to identify items to keep stocked in the service stand.

29 Chapter Twenty-nine
Styles of Service

COMPETENCY TO DEVELOP

- Utilize appropriate customer service procedures.

OBJECTIVES TO ACHIEVE

- Describe the styles of service.
- Describe examples of dining room service.
- Demonstrate correct procedures for setting tables.
- Identify types of table settings.

Food service is versatile. Counter, trayline, seated service, or a combination of these may be offered by food service operations. Food service employees need to become familiar with the styles of service available and the table settings used for each.

ACTIVITY 29-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

American or plate service ______________________________

cold course ______________________________

commis de rang ______________________________

counter worker ______________________________

cover ______________________________

French buffet ______________________________

gueridon ______________________________

plates ______________________________

Rechaud ______________________________

silencer ______________________________

trayline service ______________________________

tureens ______________________________

Additional terms

____

____

____

____

____

ACTIVITY 29-2

DIRECTIONS: Name and describe the three main styles of food service in the blanks below.

1.

2.

3.

ACTIVITY 29-3

DIRECTIONS: Complete the following activity to review the styles of seated service. In the blank to the left of each style, write the letter(s) of the characteristic(s) that best describes it. All of the letters will be used; therefore, some blanks will have more than one answer.

STYLES OF SEATED SERVICE

_____ 1. American

_____ 2. Banquet

_____ 3. Buffet

_____ 4. English

_____ 5. French

_____ 6. Russian

CHARACTERISTICS

A. Two waiters "finish" the food preparation at the table.

B. The food ordered by each customer is put on a plate in the kitchen and garnished appropriately.

C. The waiter serves the desired portion of food to the guests and returns the unserved food to the kitchen.

D. Tables are prelaid including the cold course, ice water, and bread and butter.

E. Guests serve themselves from a choice of foods placed on a long serving table.

F. Assisted by servants, the head of the household serves the food.

G. The food is served from a cart called a gueridon.

H. Used when serving a predetermined menu to a set number of guests.

ACTIVITY 29-4

DIRECTIONS: Review the correct procedures for serving the American style of food service by examining the diagram below and answering the questions following. (The large circle in the diagram represents a dinner table. The four half-circles represent the seated guests. The square boxes represent the various spots where waiters and waitresses stand while serving food.) After reading each statement below, place the symbol to the left of the statement inside the appropriate symbol in the diagram.

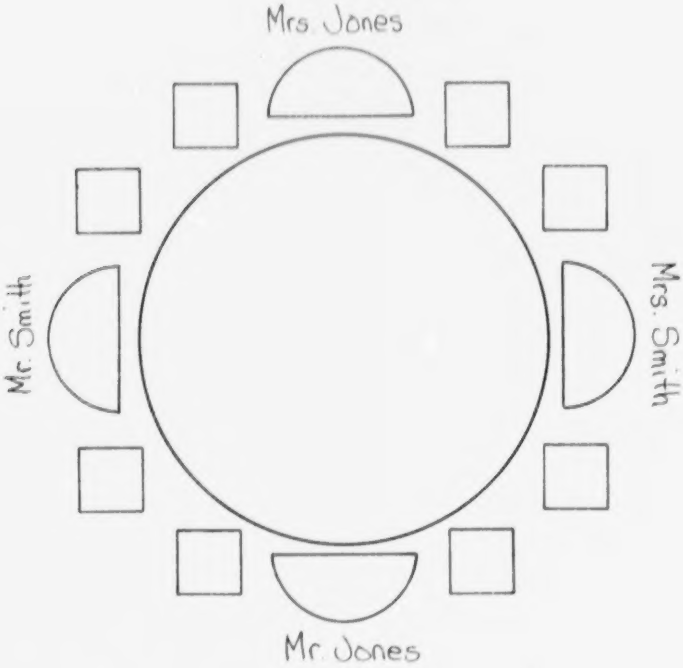
□ The two guests who will be served first.

X The place the waiter or waitress will stand while serving Mrs. Smith her salad.

O The place the waiter or waitress will stand while serving Mrs. Jones her soup.

✓ The place the waiter or waitress will stand while serving Mr. Jones his coffee.

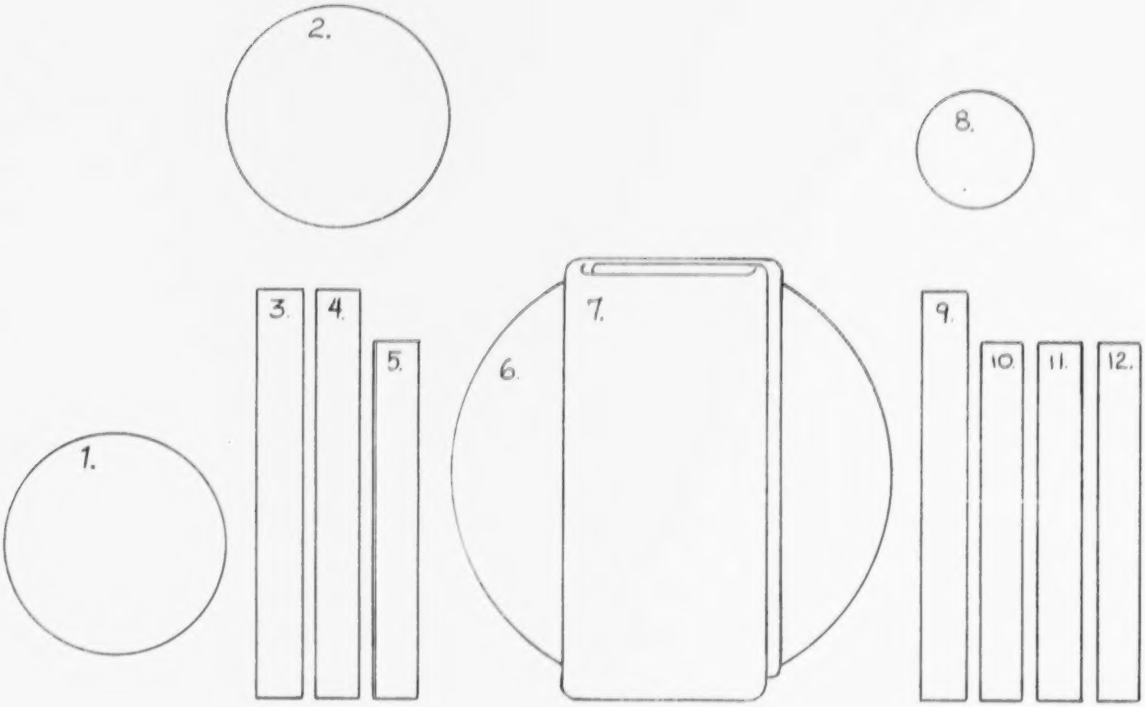
△ The place the waiter or waitress will stand while removing Mr. Smith's soiled dishes.



ACTIVITY 29-5

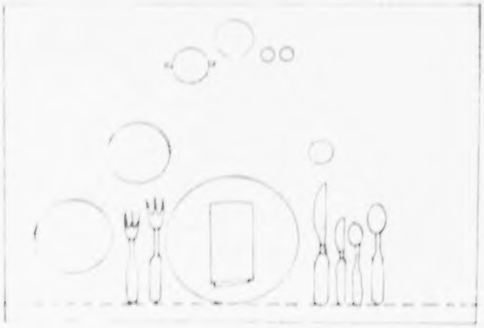
DIRECTIONS: Examine the diagram below illustrating an American dinner cover. Identify the type of flatware, dinnerware, glassware, etc., that should occupy each position on the diagram. Write the name of the item on the line corresponding to the number on the diagram.

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________

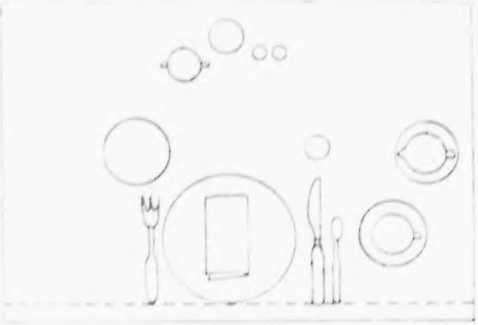


ACTIVITY 29-6

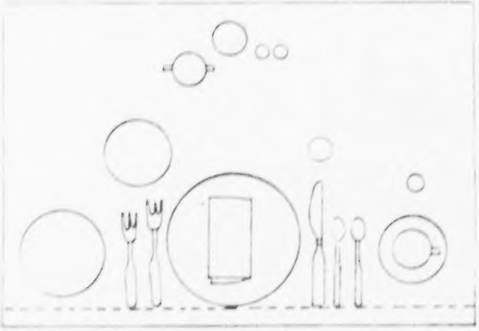
DIRECTIONS: American covers vary for breakfast, lunch, and dinner. Examine the following three diagrams and determine the differences among them. On the solid line below each diagram, write whether it is a standard breakfast setting, a standard luncheon setting, or a standard dinner setting.



1. ______________________________



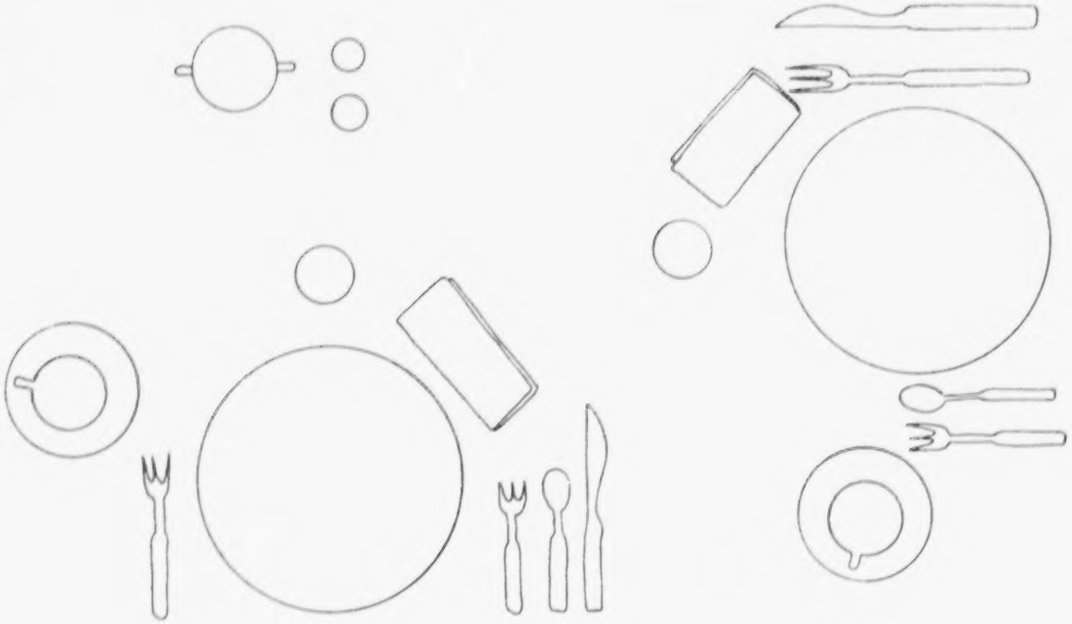
2. ______________________________



3. ______________________________

ACTIVITY 29-7

DIRECTIONS: There are at least seven mistakes in the table setting below. Write each mistake you find in the space provided below the diagram. **NOTE**: The setting is meant to be a standard luncheon setting.



30 Chapter Thirty
Table Service

COMPETENCIES TO DEVELOP

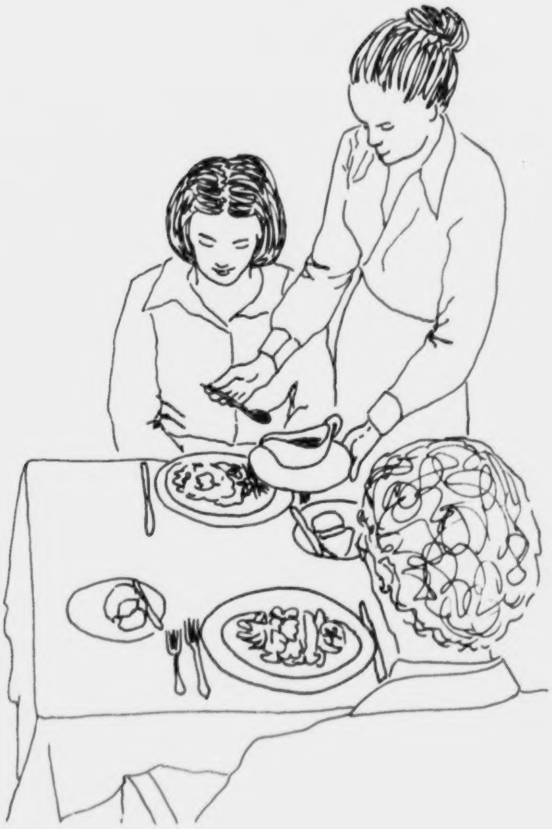
- Take dining reservations and determine seating needs, using space and personnel effectively.
- Welcome guests and oversee customer comfort.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.
- Relay orders to kitchen or serving counter.
- Pick up orders in kitchen, and verify by scanning filled plates and trays.
- Serve food and beverages in prescribed manner.
- Provide appropriate accompaniments with each course.

OBJECTIVES TO ACHIEVE

- Describe procedures for assigning guests to tables.
- Summarize procedures for greeting and seating guests.
- Describe procedures for presenting menus to guests.
- Outline procedures for writing orders.
- Describe procedures for placing orders in the kitchen.
- Cite steps in picking up, assembling, and inspecting orders.
- List the order of service for breakfast, lunch, and dinner.
- Describe procedures for serving food and beverages.
- Identify steps for removing dishes from the table.

In table service, food is served to the customer by a waiter or waitress. The customer may be seated at either tables or booths.

Table-service restaurants may offer limited to extensive menu choices. They may feature a certain type of food like seafood or a variety of foods. They may have a special theme such as ethnic, regional, or period. Some are primarily supper clubs or night clubs. They may be located in specially designed buildings, office buildings, department stores, shopping centers, ships, or trains. Their service may include counter service, soup and salad bars, buffet service, banquet service, room service, or take-out service in addition to table service.



ACTIVITY 30-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

banquette ______________________________

checkers ______________________________

table service ______________________________

table-service restaurants ______________________________

Additional terms

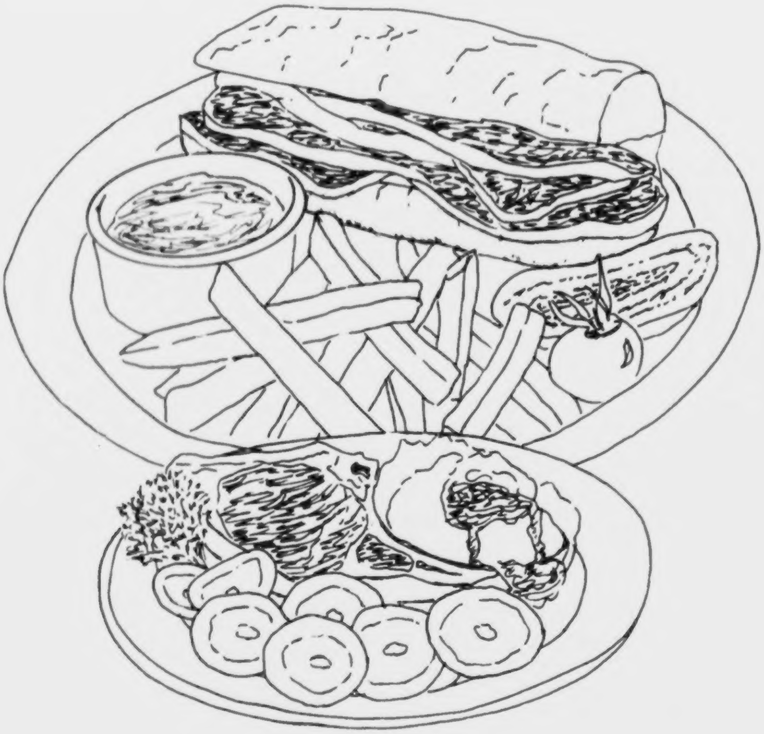
____

____

____

____

____



ACTIVITY 30-2 **DIRECTIONS**: Answer the following questions in the space provided.

1. Write two ways to greet a guest in a restaurant.

   a. ______________________________

   b. ______________________________

2. What should you do if a guest:

   a. has reservations ______________________________

   ____

   b. does not have reservations ______________________________

   ____

3. What are three considerations that may affect the selection of a table?

   a. ______________________________

   b. ______________________________

   c. ______________________________

4. At a table, when would you pull out the *best* seat for:

   a. a young lady ______________________________

   b. the eldest lady ______________________________

5. List two people that might need assistance when being seated and explain how you would assist them.

   a. ______________________________

   ____

   ____

   b. ______________________________

   ____

   ____

ACTIVITY 30-3

DIRECTIONS: You have just been hired as a hostess/host in a nice restaurant. It will be your responsibility to greet and seat guests. Listed below are various types of people you will greet each week. Explain where you will seat them and why you would seat them there. Write your answers in the space provided.

1. A large family celebrating a birthday

   a. where ______________________________

   ____

   b. why ______________________________

   ____

2. A young couple with a two year old child

   a. where ______________________________

   ____

   b. why ______________________________

   ____

3. Two individuals, one in a wheel chair

   a. where ______________________________

   ____

   b. why ______________________________

   ____

4. Four individuals with a reservation

   a. where ______________________________

   ____

   b. why ______________________________

   ____

5. Three individuals in a hurry, without a reservation

   a. where ______________________________

   ____

   b. why ______________________________

   ____

ACTIVITY 30-4

DIRECTIONS: Listed below are incorrect procedures for presenting menus to guests. Correct each statement by writing the correct procedure on the lines provided.

1. As soon as each guest of a party sits down, hand out the menus.

___

___

2. Menus should be handed to the guests from one place at the table.

___

___

3. Always give a guest a closed menu.

___

___

4. Give the menu to the youngest guest first when serving a male and a female.

___

___

5. In a large group, give the menu to the oldest female first and proceed in a clockwise direction around the table.

___

___

6. Help guests with their napkins before giving them a menu.

___

___

7. While guests study the menu, you may busy yourself by checking your watch, looking out the window, and talking with other guests.

___

___

___

785

ACTIVITY 30-5

DIRECTIONS: The following are questions that might be asked if a customer has a question about the menu. Unscramble the words to the right to review the types of information needed to answer the questions. Use one letter for each blank. When you unscramble all the words, put the circled letters in the circles for the hint. Then unscramble the letters to find the hint for how you did.

1. "I would like to order this, how do you say it?"
C A N T O O N P R V I N I
_ ○ _ _ _ _ _ I _ ○ I _ _

2. "I've never heard of this before—what is it?"
T R I P D E N I S C O
_ _ _ _ ○ I _ _ I _ _

3. "I'm hungry, what's good today?"
I L A D Y   C E A L S I P S
_ _ I _ _   _ _ ○ _ I _ _ _

4. "Can I get only half an order of this and substitute rice for corn?"
L O S E C I P I
_ ○ _ I _ I _ _

5. "I'm in a hurry, how long will this take?"
P A N T R A P R I O E   I T E M
_ ○ _ _ _ _ ○ _ I _ ○   _ I _ _

6. "What comes with the broiled chicken plate?"
P A C M O C N E A T M I N
_ ○ ○ _ _ _ _ _ _ _ _ _ _

7. "I ate here two months ago, do you still have watermelon?"
N I S O N E A S   M E I T S
I _ _ ○ _ _ _ _   _ I _ _ _

8. "Can I get tomato soup?"
Y D I L A   P O S U
_ _ I _ _   ○ _ _ _

HINT: ○○○○○○○○○○○○Ⓦ

_ _ _ _ _ _ _   _ _ _ _ _ _

ACTIVITY 30-6

DIRECTIONS: You have been working at a food service establishment for six months and your employer has just hired a new employee. Your employer has been impressed with your work and has asked you to teach the new employee the proper procedures for writing orders. Write the procedures for writing orders in the space provided.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________

ACTIVITY 30-7

DIRECTIONS: To save time and space, abbreviations are used when writing orders in food service establishments. Circle the words in the puzzle below to go with the abbreviations listed. The words in the puzzle may appear down, across, diagonally, forward, or backward. To reinforce the association of the abbreviation with the word, write the word on the line beside the appropriate word.

WORD SEARCH - WRITING ORDERS

Y K J F I C T P L X F K E V B R N
F U T V R P H E O T H C I W I N G
J B F M U U U E A R I C Y L E Z R
C H A W A J I V E U K M W K J L V
R L P R O S Y T J S L C C G I Z G
C J A W B W H E C C E I H A K E H
C O E M V E G E D O H B T O V X F
O P L A C N C A D C C K U Q P S J
F Y N E A H L U D P C K Q R C S Z
F L I R S A O E E O O E T E G Y G
E V O Q S L I W C B T T D A C E X
E D X F V R A P D Y E P A I I D R
M W E D F R M W Z E S E B T T L Y
Q H U U K I K Q N B R E F Y O M J
C S P G R I L L E D C H E E S E C
E A V H T U N A S A N D W I C H S
Z Q S F R E N C H F R I E S U U L

1. BBQ ____________________
2. C Burg ____________________
3. Chef Sal ____________________
4. Chow ____________________
5. Cof ____________________
6. col ____________________
7. ff ____________________
8. FChix ____________________
9. FrC ____________________
10. GC ____________________
11. mash ____________________
12. OJ ____________________
13. PC ____________________
14. ShC ____________________
15. T ____________________
16. Ts ____________________

ACTIVITY 30-8

DIRECTIONS: Answer the following exercises on placing orders in the kitchen. Write your answers in the space provided.

1. What do you do before placing an order in the kitchen?

____

____

2. List four commonly used methods for placing orders in the kitchen:

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

3. When should orders be placed? ______________________________

____

4. What does the kitchen need to know if guests at the same table request separate checks?

____

____

____

5. What are two things that you can do if the order does not appear within a reasonable length of time?

a. ______________________________

____

b. ______________________________

____

ACTIVITY 30-9

DIRECTIONS: Listed below are steps of the procedures for picking up, assembling, and inspecting orders. Place an A in the blanks that are steps in assembling an order, an I in the blanks that are steps in inspecting orders, and a P in the blanks that are steps in picking up orders.

A = Assembling

I = Inspecting

P = Picking up

1. ______ gather accompaniments
2. ______ rinse hot coffee and tea pots with hot water before filling
3. ______ make sure the quantity of food is correct
4. ______ serve cold foods first, then hot foods
5. ______ tell announcer when a table number has been picked up
6. ______ check for spilled food
7. ______ pour ice drinks into cool glasses
8. ______ be sure needed serving equipment is on tray
9. ______ be sure food is attractively served with proper garnishes
10. ______ add garnishes
11. ______ see if order is correct
12. ______ put butter on a cool plate
13. ______ make sure food is properly cooked
14. ______ separate hot foods from cold foods on the tray
15. ______ serve as soon as possible to insure proper serving temperatures

ACTIVITY 30-10

DIRECTIONS: Food and beverages are served in a prescribed manner in most food service establishments. Using information from the reference book list the order of service for breakfast, lunch, and dinner by placing numbers in the blanks to the left of the item. Place a 1 by the first item to be served, a 2 by the second item to be served, and so on for each meal. When you have placed numbers in each blank, add up the numbers circled for each meal and place the three totals in the blanks provided. Add the three totals to see if they match the correct total listed. If your total does not match the correct total listed, check your addition and your answers to see if you have the correct order of service for the meals.

BREAKFAST

○ cereal
_____ bread
_____ menu
○ jellies, jams, syrups
○ fruit and juice
_____ eggs, meat, other hot food
○ water, offer coffee

TOTAL #1 __________

DINNER

○ appetizer, soup, or salad
○ coffee or demitasse
○ menu
_____ bread or rolls
_____ water
_____ main entree
○ bread, butter, and relishes
_____ beverage
_____ dessert

TOTAL #3 __________

LUNCH

○ beverage
_____ bread and butter
○ main dish
○ water
_____ menu
○ bread or rolls
_____ dessert
_____ salad served with main dish
_____ appetizer, soup, or salad
_____ side dishes

TOTAL #2 __________

TOTALS:

Total #1 ____________
Total #2 ____________
Total #3 ____________
YOUR TOTAL ____________
CORRECT TOTAL 54

ACTIVITY 30-11

DIRECTIONS: Explain the order of serving the following guests. Write your answer in the space provided.

In what order do you serve guests when......

1. A man and woman are seated together? ____________________

____

2. Two couples are seated together? ____________________

____

3. Three couples are seated together? ____________________

____

4. Six or more people are seated together? ____________________

____

5. It is not apparent who is the host or hostess? ____________________

____

ACTIVITY 30-12

DIRECTIONS: It is important to know the general rules of serving food and beverages in order not to inconvenience the guest. Complete the following statements on food service procedures for serving by placing an X by the correct answer. Reinforce the serving procedure by reading the statement and writing the answer selected in the blank provided.

AT A TABLE

1. Serve food from the ____________.
   _____left _____right

2. Serve soup from the ____________.
   _____left _____right

3. Refill beverages from the ____________.
   _____left _____right

4. Serve beverages from the ____________.
   _____left _____right

AT A BOOTH

5. Serve the guest on the ____________ first.
   _____left _____right

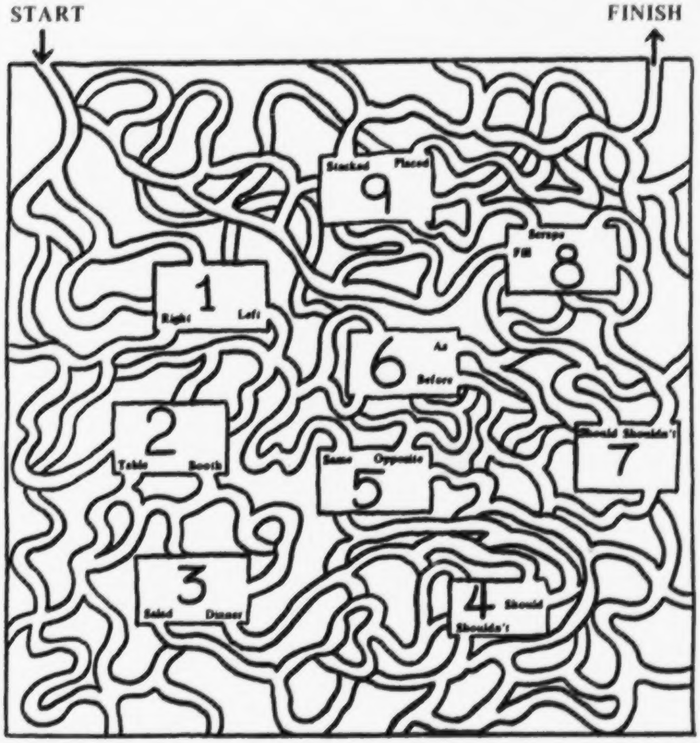
6. Serve the guest on the left with the ____________ hand.
   _____left _____right

7. Place dishes on the table with the thumb on the ____________ edge of the plate.
   _____upper _____lower

8. Plates should be ____________ into place.
   _____slid _____lowered

ACTIVITY 30-13

DIRECTIONS: The following activity will help you identify the steps for removing dishes from the table. Read the first question and then follow the path on the maze to the first box which has a choice of answers. Select the answer which completes the statement correctly and write it in the blank provided. Read the next question and continue through the path from the last correct answer. **NOTE**: Each question must be answered correctly to reach the end of the maze.


START
FINISH
Stacked
Placed
9
Scrape
Fill
8
1
Right
Left
6
As
Before
2
Table
Booth
Same
Opposite
5
Should
Shouldn't
7
3
Salad
Dinner
4
Should
Shouldn't

1. Dishes are usually cleared from the ______________________ side of a customer.

2. Never reach across a guest to clear away dishes unless it is at a ______________________.

3. When removing dishes, the ______________________ or ______________________ plate is removed first.

4. Remove a course's dishes only when everyone is finished because the place in front of a guest ______________________ be left empty.

5. Always use the ______________________ hand to remove dishes at the side you are standing on.

6. When reaching across a table, inform the guest ______________________ you do so.

7. When one person in a group of diners has finished the course that individual's dishes ______________________ be removed.

8. Never ______________________ dishes in front of guests.

9. Dishes should not be ______________________ in front of guests at the table.

31

Chapter Thirty-one
Counter and Self-Service

COMPETENCIES TO DEVELOP

- Welcome guests and oversee customer comfort.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.
- Relay orders to kitchen or serving counter.
- Pick up orders in kitchen, and verify by scanning filled plates and trays.
- Package take-out orders, and serve take-out customers.
- Serve food and beverages in prescribed manner.
- Provide appropriate accompaniments with each course.

OBJECTIVES TO ACHIEVE

- Identify the types of counter and self-service.
- Describe procedures for preparing the facility for counter and self-service.
- Describe procedures for taking and relaying orders.
- Identify food preparation tasks performed by counter service personnel.
- Summarize procedures for sanitizing the food service counter.
- Outline procedures for serving counter and self-service orders.
- Describe procedures for packaging take-out orders.

Many food service customers want a modestly priced meal and quick service. Quick-service restaurants meet the needs of these customers by providing counter, tray, or self-service. Counter, tray, and self- service are usually inexpensive and informal styles of service. They allow for rapid service with a minimum of appointments.

ACTIVITY 31-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

automated self-service ______________________________

quick service restaurants ______________________________

runners ______________________________

self-sufficient bar-back ______________________________

supply workers ______________________________

Additional terms

____

____

____

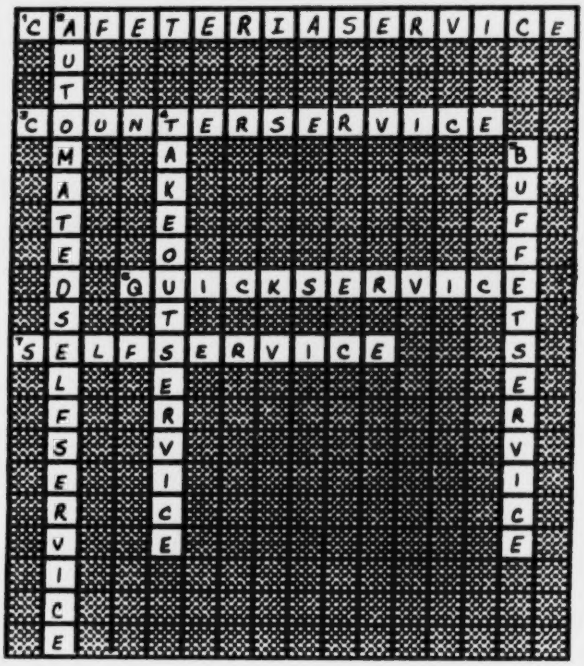
____

____

794

ACTIVITY 31-2

DIRECTIONS: The following crossword puzzle has the answers already filled in, but the clues are missing. In the spaces provided, write a clue for each answer which is a type of counter or self-service. The clues should define or explain each service.


1 CAFETERIASERVICE
2 AUTOMATEDSELFSERVICE
3 COUNTERSERVICE
4 TAKEOUTSERVICE
5 BUFFETSERVICE
6 QUICKSERVICE
7 SELFSERVICE

ACROSS CLUES

1. ______________________________

3. ______________________________

6. ______________________________

7. ______________________________

DOWN CLUES

2. ______________________________

4. ______________________________

5. ______________________________

ACTIVITY 31-3

DIRECTIONS: To review the procedures for preparing the food service facility for counter and self-service as discussed in the reference book, complete the following activity. In the blank to the left of each preparation procedure, write the letters of the food service facilities that would require the preparation procedure.

PREPARATION PROCEDURE

_____ 1. Check supplies and restock before serving hours.

_____ 2. Arrange supply tables and shelves neatly.

_____ 3. Prepare a separate table for appetizers, beverages, and desserts.

_____ 4. Assemble an adequate supply of dishes and serving utensils.

_____ 5. Arrange the serving line.

_____ 6. Prepare steam tables and hot counters.

_____ 7. Place guest plates at one end of the line.

_____ 8. Set covers at each place along the counter.

_____ 9. Wash dishes, glassware, flatware or serving utensils left from earlier shift.

_____10. Polish glass shelves, metal surfaces and counter tops before serving hours.

_____11. Arrange menus, condiments, and napkins neatly on top of counter.

_____12. Replenish trays, napkins, and flatware.

_____13. Assemble relishes, condiments, and prepackaged food items in proper location.

_____14. Place cold dishes, main dishes, salads, and breads in the middle of the table.

_____15. Display hot foods, salads, desserts, breads, and beverages attractively.

FOOD SERVICE FACILITY

A. Buffet

B. Cafeteria

C. Counter

ACTIVITY 31-4

DIRECTIONS: To review the procedures for taking, relaying, and serving orders, complete the following statements in the space provided.

1. Describe three ways a food service employee may take an order from a guest:

   a. ______________________________

   b. ______________________________

   c. ______________________________

2. After an order is taken explain three ways to relay the order to the kitchen:

   a. ______________________________

   b. ______________________________

   c. ______________________________

3. Outline four procedures for serving counter orders:

   a. ______________________________

   b. ______________________________

   c. ______________________________

   d. ______________________________

4. Describe two ways of serving a buffet:

   a. ______________________________

   b. ______________________________

5. You have been hired to work in a cafeteria and your employer wants to make sure you understand the procedures for serving food to customers. In a brief paragraph explain the proper procedures for serving food in a cafeteria.

   ____

   ____

   ____

   ____

   ____

ACTIVITY 31-5

DIRECTIONS: Identify food preparation responsibilites of cafeteria workers and counter workers. In EXERCISE A write the TYPE OF FOOD across from the appropriate DISPLAY METHOD used by a cafeteria worker. The letters should fit in the numbered spaces provided. To identify preparation responsibilities of the counter worker, in EXERCISE B, write the letters from A in the corresponding numbered space of B. For example: the letter placed over the number 12 under TYPE OF FOOD in EXERCISE A would be placed over each number 12 in EXERCISE B.

EXERCISE A

DISPLAY METHOD	**TYPE OF FOOD**
1. Should be overlapped	12 5 1 18 19
2. Arranged to contrast in color	19 1 11 1 4 19
3. Arranged among food	8 1 16 15 6 19 7 5 19
4. Grouped according to type	4 5 19 19 5 16 18 19
5. Displayed so point faces customer	13 6 5 17 5 4 8 5 19
6. Should be placed in center of pan	12 5 1 18 11 14 1 9
7. Should be placed in straight rows	12 5 1 18 2 1 11 11 19
8. Center slices on plates	3 1 10 5 & 13 6 5

EXERCISE B.

12 1 10 6 15 8   3 14 9 9 5 5,   4 6 19 13 5 15 19 6 15 8

12 6 11 10   1 15 4   19 14 9 18   4 16 6 15 10 19,

13 16 5 13 1 16 6 15 8   6 3 5   3 16 5 1 12

4 16 6 15 10 19,   4 5 19 19 5 16 18 19,   1 15 4

12 1 10 6 15 8   19 1 15 4 17 6 3 7 5 19

ACTIVITY 31-6

DIRECTIONS: To review procedures for sanitizing the food service counter, answer the following questions. Write your answers in the space provided.

1. Why is it important that everything behind the counter be kept spotless and neat at all times?

2. Describe one thing the food service employee *should do* and one thing the food service employee *should not do* when handling food.

should do: ____________________

should not do: ____________________

3. Why are sanitation practices especially important for counter workers?

4. How might an employee's personal hygiene habits affect the food service establishment where he or she is employed?

5. Write a paragraph expressing your view of the importance of sanitation when counter workers handle both food and money.

ACTIVITY 31-7

DIRECTIONS: The following exercise will help you describe procedures for packaging take-out orders and serving take-out customers. Answer the following statements by circling the T if the statement is true and F if the statement is false. If the statement is false, write the corrected statement on the lines provided. When you have answered all of the statements, start at "1" and go through the maze passing through the blank of each answer you circled. Remember, only the correct answers will allow you to move through the maze. A wrong answer will lead you to a dead end. Be sure to review the information in the reference book and then correct any answers you may have missed.

T F 1. Take-out orders may be a complete meal, single item, or meal combination.

____

____

T F 2. Some seated-service restaurants and cafeterias offer take-out service along with table service.

____

____

T F 3. All fast-food service operations feature take-out service.

____

____

T F 4. Supplies of disposables and prepackaged foods should never be restocked during serving hours.

____

____

T F 5. Take-out orders may be placed only at a drive up window or an automated ordering device.

____

____

T F 6. Repeat an order to the customer only if you are not sure it is correct.

____

____

T F 7. When packaging take-out orders, they should be wrapped, sacked, boxed, or placed in disposable containers.

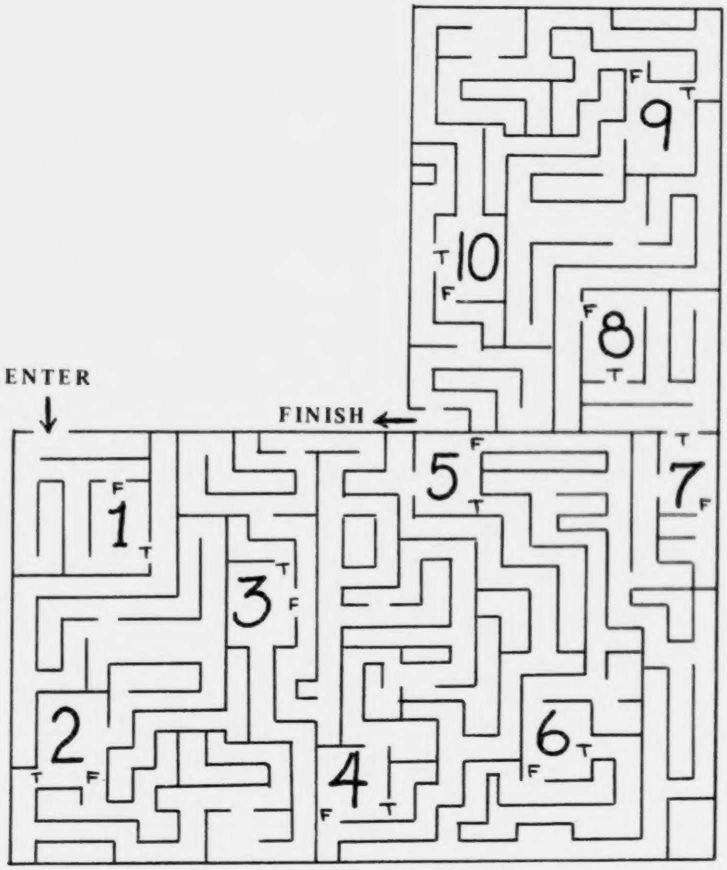
____

____

T F 8. Include accompaniments such as salt, pepper, and sauces in a take-out order only when a customer requests it.

T F 9. As a convenience to the customer straws, napkins, and plastic utensils should always be provided in a take-out order.

T F 10. After the take-out order is given the counter worker may serve the customer, add the sales check, collect the money, and then make change.


ENTER
FINISH
9
F
T
10
T
F
8
F
T
5
F
T
7
T
F
1
F
T
3
T
F
2
T
F
4
F
T
6
T
F

32

Chapter Thirty-two

Other Types of Food Service

COMPETENCIES TO DEVELOP

- Set up rooms for catered parties.
- Serve food at customer's table, a seated banquet, or special occasion.
- Pack and transport food, beverages, utensils, and equipment.
- Maintain quality of transported food.
- Unload and deliver food and beverages.
- Serve food and beverages to guests or patients in their rooms.
- Check guests' or patients' needs and supply needed items.
- Pick up food carts, and empty trays from patients, guests, or customers.
- Pick up and return trays, dishes, utensils, and equipment to dishwashing area.
- Prepare artistic food displays for serving linens, buffets, soup and salad bars, and special events.

OBJECTIVES TO ACHIEVE

- Summarize procedures for setting up rooms for special occasions.
- Outline procedures for banquet service.
- Describe equipment and procedures used for packing and transporting food, utensils, and equipment.
- Summarize preparation and service techniques used in catering.
- Outline procedures for assembling patient trays.
- Describe procedures for delivering trays to patients.

- Outline procedures for preparing, transporting, and serving room service orders.
- Describe opportunities for showmanship when preparing, decorating, and displaying food.

Most service personnel are employed in restaurants. Others are employed in facilities which use specialized types of service. Some food service establishments provide facilities for serving large banquets. Some establishments cater food for special functions. Food service units serving health care facilities use specialized systems to distribute food to patients and residents. Restaurants in hotels and motels usually provide room service to guests. Some restaurants use showmanship in preparing, decorating, displaying, and serving food. Each of these specialized types of food service require specially trained service personnel.

ACTIVITY 32-1

DIRECTIONS: Using a dictonary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

caterer ____

dais ____

diet orders ____

floaters ____

Additional terms

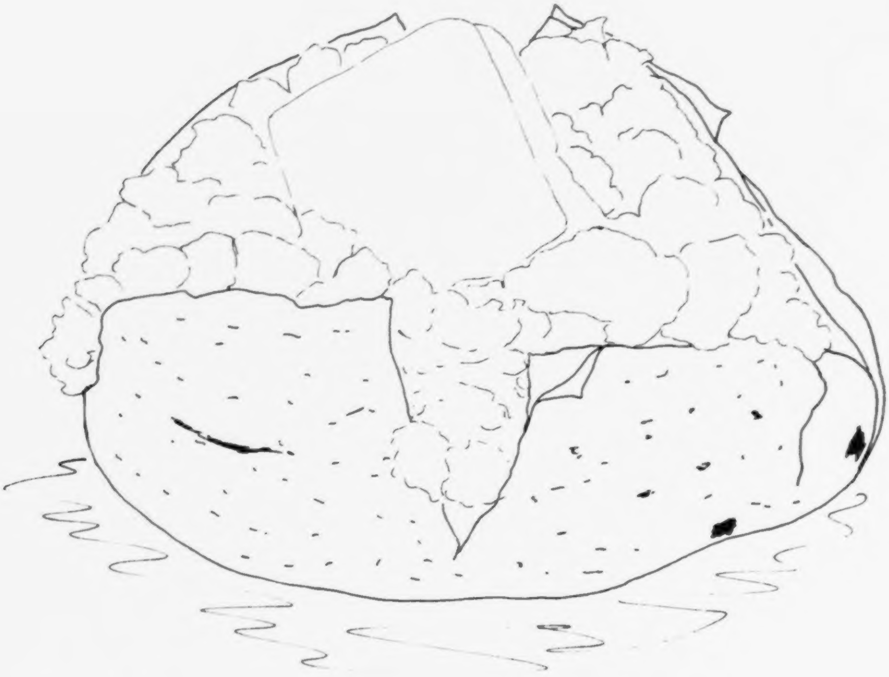
____

____

____

____

____



ACTIVITY 32-2

DIRECTIONS: Summarize procedures for setting up rooms for special occasions by answering the following questions.

1. When do preparations for a large banquet begin?

____

____

2. Discuss the four things a customer must arrange for when planning a banquet:

____

____

____

____

3. What two factors influence the assignment of a dining room?

____

____

4. Who arranges the dining room, and when is it done?

____

____

5. Why should seating arrangements for banquets be carefully planned?

____

____

6. When arranging a room for a banquet, what are six things to keep in mind when setting up the tables?

____

____

____

____

____

____

7. Why should the head table be elevated on a dais?

____

____

8. After the tables are arranged, what are three things to remember when laying tablecloths?

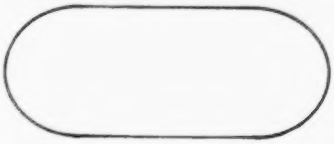
____

____

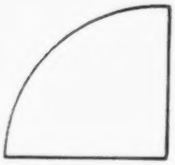
____

ACTIVITY 32-3

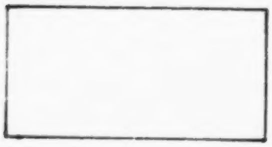
DIRECTIONS: A. Identify table shapes used in table arrangements for banquet service. Write the appropriate term for the table shape in the space to the right of the illustration.



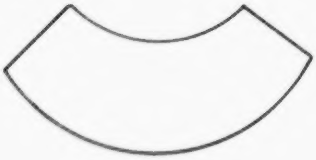
1. ______________________________



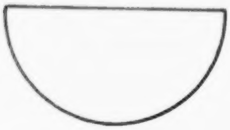
2. ______________________________



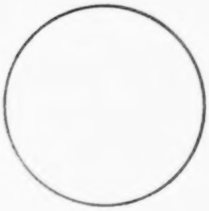
3. ______________________________



4. ______________________________



5. ______________________________



6. ______________________________

DIRECTIONS: B. Certain information is needed to create a table arrangement for banquet service. Fill in the following information to use when planning the table arrangement.

TYPE OF FUNCTION Banquet; Buffet; Reception (circle one)

TYPE OF SERVICE Formal; Informal (circle one)

NUMBER OF GUESTS ______________________

HEAD TABLE Yes No (circle 1)

NUMBER OF GUESTS AT HEAD TABLE (IF USED) ______________________

DIRECTIONS: C. In the space provided, sketch the table arrangement for the above. Use more than one type of table in the arrangement. Each type of table may be used more than once.

ACTIVITY 32-4

DIRECTIONS: Reinforce your knowledge of the two styles of service usually used at banquets by matching the service to the appropriate description. Place the letter of the service in the blank to the left of each description. When each description has been matched to its style, add up all the numbers next to the As. Add up all the numbers next to the Bs. Place your total figures in the space provided. There will be a difference of five between the two totals if your answers are correct.

Descriptions

____ 1. Banquet service is elaborate and formal

____ 2. Plates are covered with metal covers

____ 3. All cold foods are set on tables before the meal begins

____ 4. Each guest is served individually

____ 5. Food is brought into the dining room on silver platters

____ 6. Covered plates are carried on large trays to tray stands

____ 7. Dinner plates are on each guest's cover when table is set

____ 8. Place settings are more complicated

____ 9. Covers are removed as plates are placed before the guests

____10. Banquet tables are completely set in advance

Styles of service

A. American banquet service

B. Russian banquet service

TOTAL OF As __________

TOTAL OF Bs __________

DIFFERENCE IN TOTALs __________

ACTIVITY 32-5

DIRECTIONS: Identify procedures for service which help to coordinate banquet service. Listed below are several banquet procedures, some of which are incorrect. Place an X by the procedures which are incorrect. Place an O by the procedures which are correct. Then, for all procedures you marked with an X, write correct procedures in the space provided at the bottom of the page.

____ 1. Banquet service is carefully coordinated so that each course is served at the same time by waiters and waitresses.

____ 2. Banquet service is carefully coordinated so that courses are served by waiters and waitresses as each guest is ready.

____ 3. The head table is usually served last.

____ 4. The head table is always served first.

____ 5. Buspersons may carry trays from the service area to the tray stand.

____ 6. Buspersons are allowed to bus tables only at the conclusion of a meal.

____ 7. Floaters may be used to pass butter, rolls, beverages, and to serve beverages.

____ 8. Floaters are used to carry trays from the service room to the service stand.

____ 9. Teams of waiters, waitresses, buspersons, and floaters work individually to ensure quick and efficient service to the guests.

____10. Teams of waiters, waitresses, buspersons, and floaters work together to ensure that each course with all its accompaniments is served at all tables at the same time.

____11. In banquet service each course is cleared by waiters and waitresses at the same time.

____12. In banquet service each course is cleared by the buspersons and floaters at the same time.

Correct procedures for all banquet service:

____

____

____

____

____

____

ACTIVITY 32-6 **DIRECTIONS**: Food service establishments often provide specialized types of food service. Complete the following chart to compare the procedures used by the specialized types of food service. Write your answers in the space provided.

Specialized Service	Where is it prepared?	How is it assembled or packaged?	How is it transported?	How or where is it served?
CATERED SERVICE				
HOTEL/MOTEL ROOM SERVICE				
HOSPITAL ROOM SERVICE				
CAR SERVICE				
AIRPLANE SERVICE				

8 10

ACTIVITY 32-7

DIRECTIONS: Unscramble the words below to identify the different foods used in food showmanship. The words to be unscrambled are listed below. In the space provided, describe how food showmanship can be exhibited with each food.

cakes
coffee
fruit desserts
hors d'oeuvres
ice
Japanese food
punch
steaks

1. SACKE ____________________

____

____

2. FEOEFC ____________________

____

____

3. NHCUP ____________________

____

____

4. KETSAS ____________________

____

____

5. ROSH VEOREDSU ____________ ____________

____

____

6. CEI ____________________

____

____

7. PAENAESJ OFOD ____________ ____________

____

____

8. FTRIU SETSEDRS ____________ ____________

____

____

33

Chapter Thirty-three
Money Handling

COMPETENCIES TO DEVELOP

- Itemize and total price of each order.
- Present check to customer and accept payments or refer customer to cashier.
- Handle payments (cash, checks, credit cards), operating cash register, making change, and writing receipts.
- Prepare cash drawer.
- Prove cash, and prepare deposits.
- Give tips to proper waiters/waitresses.

OBJECTIVES TO ACHIEVE

- Describe the procedures for computing the check.
- Describe the procedures for presenting checks to customers.
- Cite procedures for accepting personal checks and credit cards.
- Explain the procedure for making change.
- Cite procedures for setting up and using a cash register.
- Summarize procedures for verifying cash on hand.
- Cite guidelines for handling tips.

The main purposes of a commercial food service establishment are to serve customers and to make a profit. Therefore, both human relations skills and mathematical skills are needed by almost every employee in a food service operation. The duties of a food service employee often include computing the check, presenting the check, handling money, and making change.

ACTIVITY 33-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

cash drawer ______

cash on hand ______

cash over ______

cash short ______

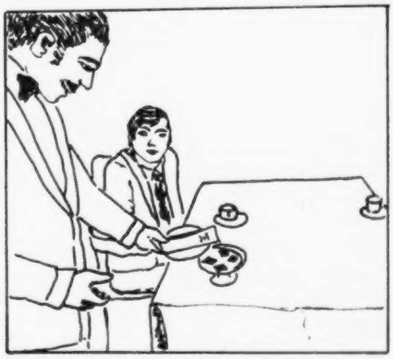
cover charges ______

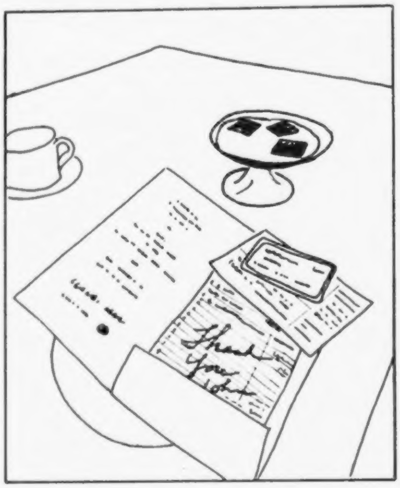
Employer's Report on Tips ______

Fair Labor Standards Act ______

tax table ______

Additional Terms





ACTIVITY 33-2

DIRECTIONS: Without using a calculator, figure the sub-total, figure the sales tax, and check the total for the following prices of menu items on guest checks. **NOTE**: The answers to this activity were obtained by using a 6% sales tax. You may want to use the current sales tax rate for your state or community.

	1.	2.	3.	4.
	$ 3.95	$ .99	$14.90	$ 3.15
	.75	.55	2.45	1.23
	+ 1.50	+ .45	+ 1.25	+ .64
Sub Total	______	______	______	______
Sales Tax	______	______	______	______
Check Total	______	______	______	______

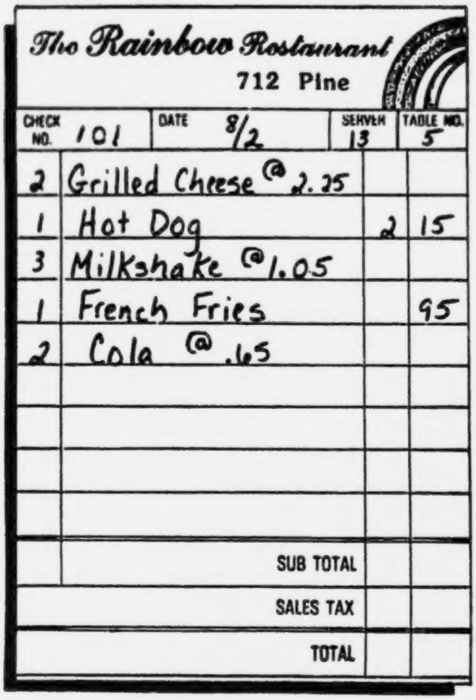
	5.	6.	7.	8.
	$ 2.75	$11.42	$ .42	$ 1.24
	5.35	8.98	5.13	.42
	.75	.69	7.45	3.13
	+ 1.20	+ .69	+ .56	+ .62
Sub Total	______	______	______	______
Sales Tax	______	______	______	______
Check Total	______	______	______	______

	9.	10.	11.	12.
	$13.25	$ .79	$ 8.23	$13.20
	10.15	2.59	7.59	12.13
	2.55	1.99	3.15	5.74
	1.00	.49	.58	1.15
	+ 1.00	+ 3.29	+ .62	+ 1.25
Sub Total	______	______	______	______
Sales Tax	______	______	______	______
Check Total	______	______	______	______

ACTIVITY 33-3

DIRECTIONS: Complete the following guest checks by supplying the empty boxes with the correct figures and by computing the subtotal, sales tax, and total for each check. **NOTE**: The answers for this activity were obtained by using a 6% sales tax. You may want to use the current sales tax rate in your state or community. Do *not* use a calculator.

1.

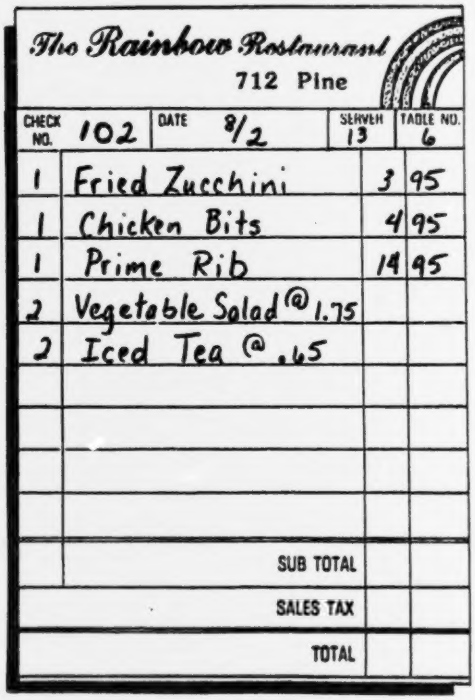


The Rainbow Restaurant
712 Pine

CHECK NO.	DATE	SERVER	TABLE NO.
101	8/2	13	5

2	Grilled Cheese @ 2.25		
1	Hot Dog	2	15
3	Milkshake @ 1.05		
1	French Fries		95
2	Cola @ .65		
	SUB TOTAL		
	SALES TAX		
	TOTAL		

2.



The Rainbow Restaurant
712 Pine

CHECK NO.	DATE	SERVER	TABLE NO.
102	8/2	13	6

1	Fried Zucchini	3	95
1	Chicken Bits	4	95
1	Prime Rib	14	95
2	Vegetable Salad @ 1.75		
2	Iced Tea @ .65		
	SUB TOTAL		
	SALES TAX		
	TOTAL		

ACTIVITY 33-4

DIRECTIONS: Find the mistake(s) on each of the following guest checks. To make corrections, draw a line through each error and write the correct figure above it. **NOTE**: 6% sales tax was used.

1.

The Rainbow Restaurant
712 Pine

CHECK NO.	DATE	SERVER	TABLE NO.
103	8/2	13	7

1	Steak Fingers	4	40
1	Broiled Flounder	5	20
1	Spaghetti	4	00
1	Chef Salad	3	80
2	Vegetable Salad @ 1.75	3	50
2	Iced Tea @ .65	1	30
2	Milk @ .60	1	20
	SUB TOTAL	23	80
	SALES TAX	1	19
	TOTAL	24	99

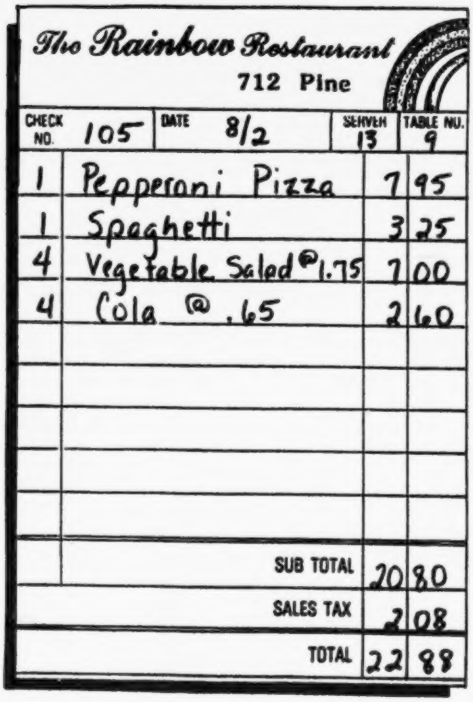
2.

The Rainbow Restaurant
712 Pine

CHECK NO.	DATE	SERVER	TABLE NO.
104	8/2	13	8

1	Cheese Omelet	3	95
1	Pancake Special	2	95
1	Orange Juice		65
1	Milk		60
2	Coffee @ .45		95
	SUB TOTAL	9	10
	SALES TAX		46
	TOTAL	9	56

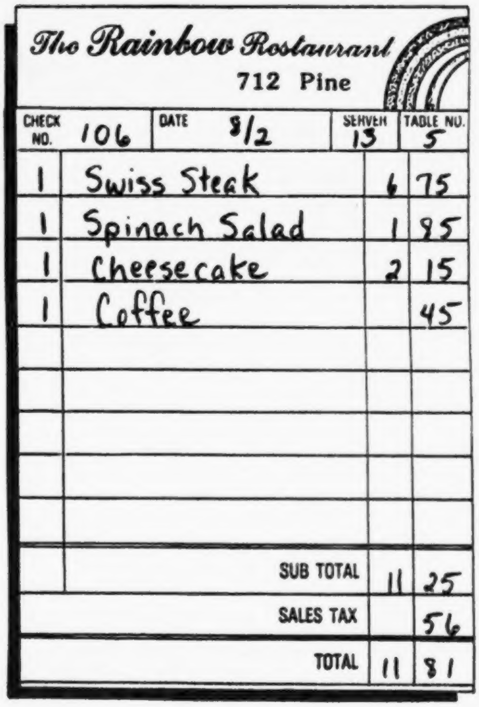
3.



The Rainbow Restaurant
712 Pine

CHECK NO. 105	DATE 8/2	SERVER 13	TABLE NO. 9
1	Pepperoni Pizza	7	95
1	Spaghetti	3	25
4	Vegetable Salad @ 1.75	7	00
4	Cola @ .65	2	60
	SUB TOTAL	20	80
	SALES TAX	2	08
	TOTAL	22	88

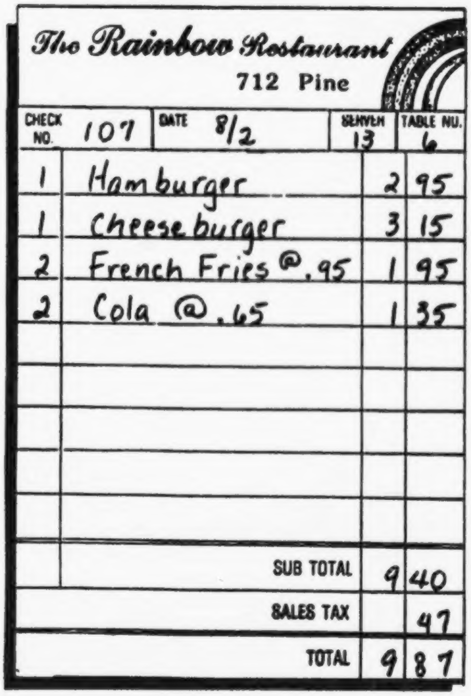
4.



The Rainbow Restaurant
712 Pine

CHECK NO. 106	DATE 8/2	SERVER 13	TABLE NO. 5
1	Swiss Steak	6	75
1	Spinach Salad	1	85
1	Cheesecake	2	15
1	Coffee		45
	SUB TOTAL	11	25
	SALES TAX		56
	TOTAL	11	81

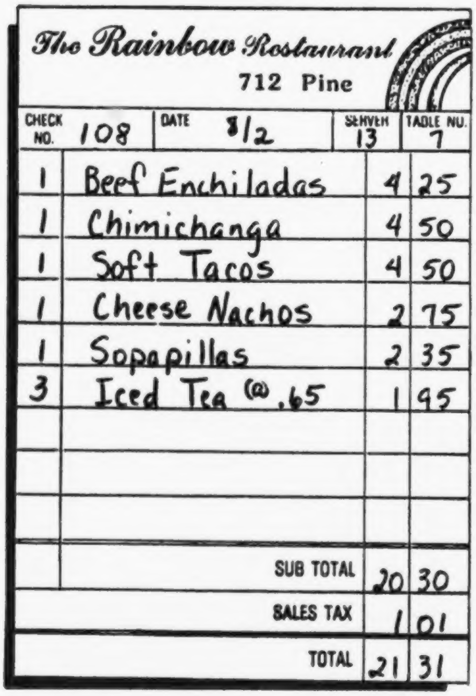
5.



The Rainbow Restaurant
712 Pine

CHECK NO. 107	DATE 8/2	SERVER 13	TABLE NO. 6
1	Hamburger	2	95
1	Cheeseburger	3	15
2	French Fries @ .95	1	95
2	Cola @ .65	1	35
	SUB TOTAL	9	40
	SALES TAX		47
	TOTAL	9	87

6.



The Rainbow Restaurant
712 Pine

CHECK NO. 108	DATE 8/2	SERVER 13	TABLE NO. 7
1	Beef Enchiladas	4	25
1	Chimichanga	4	50
1	Soft Tacos	4	50
1	Cheese Nachos	2	75
1	Sopapillas	2	35
3	Iced Tea @ .65	1	95
	SUB TOTAL	20	30
	SALES TAX	1	01
	TOTAL	21	31

ACTIVITY 33-5

DIRECTIONS: Read each statement on the do's and don'ts of presenting checks. Place an X in the blank under the "Do" if the statement describes a behavior that should be practiced. Place an X in the blank under the "Don't" if the statement describes a behavior that should not be practiced.

Do	Don't	
____	____	1. Complete the check away from the serving area.
____	____	2. When returning change to a customer, keep the amount you think you deserve as a tip.
____	____	3. Always present the check to a male, even if a female has indicated a desire to pay the check.
____	____	4. Stand to the right of the customer when counting change.
____	____	5. When presenting a check to a guest, place the check face down to the guest's right.
____	____	6. Orally count change back to a customer.
____	____	7. Count change only once to insure speed and save time.
____	____	8. If a customer needs to pay the cashier, tell him or her.
____	____	9. When presenting the check on a tray, place it face down.

ACTIVITY 33-6 **DIRECTIONS**: Read the case studies below. Then answer the questions in the space provided.

CASE SITUATION #1

Lee is a waitress in the Longshore Lunchroom. The group of people she has been waiting on have just finished their meal. The group consists of three men and Lee cannot determine which member of the group is the host. Because she does not know who to present the check to, she is faced with a problem and desperately needs your advice. Please inform Lee as to where she should place the check.

CASE SITUATION #2

Lonnie is a waiter in a restaurant called The Lobster Landing. After serving dinner to a guest, Lonnie placed the check face down on the table to the guest's right. The guest thanked Lonnie, picked up the check, and walked toward the entrance. Lonnie had intended for the man to pay at the table. What action of Lonnie's caused the confusion?

CASE SITUATION #3

Lauro has been waiting on a group of businessmen and businesswomen in The Lakeside Loft. Earlier in the evening, one of the businesswomen indicated to Lauro that she would be paying the check. Now that the group is finished with their meal, how and to whom should Lauro present the check? (**NOTE**: The payment procedure in this particular restaurant is through a cashier at the front of the restaurant rather than through the waiter or waitress at the table.)

ACTIVITY 33-7 **DIRECTIONS**: Answer the following questions in the space provided.

1. Describe the procedure for accepting payment of the check with a credit card.

____

____

____

____

2. Describe the procedure for accepting payment of the check with a traveler's check.

____

____

____

____

3. Why should the policies of the food service establishment be closely followed when accepting payment of the check with a personal check?

____

____

____

____

ACTIVITY 33-8 **DIRECTIONS**: What is the least possible number of coins you can give customers when their change is in these amounts? Put the number of coins needed in the blank beside each amount given. In the parentheses, list the coins in the order you would count them back to a customer. Do not use fifty-cent pieces.

EXAMPLE: 59¢ 6 (2 quarters + 1 nickel + 4 pennies)

1. 42¢ ________ (______________________________)
2. 63¢ ________ (______________________________)
3. 75¢ ________ (______________________________)
4. 83¢ ________ (______________________________)
5. 92¢ ________ (______________________________)
6. 20¢ ________ (______________________________)
7. 69¢ ________ (______________________________)

ACTIVITY 33-9

DIRECTIONS: Follow the correct procedure for counting out change to a customer. Beside each a, write the correct denomination needed to make the change. Beside each b, write how to count the change back to the customer.

EXAMPLE: $1.25 $ 2.00 a. 1 quarter and 1 fifty-cent piece

b. 1.25, $1.50, and $2.00

TOTAL BILL	MONEY RECEIVED	CORRECT CHANGE GIVEN
1. $1.25	$ 5.00	a. ______
		b. ______
2. $1.79	$ 2.00	a. ______
		b. ______
3. $1.79	$10.00	a. ______
		b. ______
4. $1.79	$20.00	a. ______
		b. ______
5. $2.35	$ 3.00	a. ______
		b. ______
6. $2.35	$ 3.25	a. ______
		b. ______
7. $5.13	$ 6.03	a. ______
		b. ______
8. $6.66	$10.00	a. ______
		b. ______
9. $6.66	$ 7.16	a. ______
		b. ______

ACTIVITY 33-10

DIRECTIONS: Answer the following questions in the space provided.

1. Jack is working the cash register during the noon rush. A customer hands Jack a $10 bill to pay for food amounting to $3.53. What should Jack do with the $10 bill while he is counting out the customer's change.

2. Why is the starting cash in the cash register checked at the beginning of the day or shift?

3. What is the starting cash used for?

4. Summarize the steps that should be followed when closing the cash register.

5. Describe two types of cash registers that vary in terms of how the customer's change is presented:

ACTIVITY 33-11 **DIRECTIONS**: You are a cashier in The Rainbow Restaurant, and it is your responsibility to complete a cash register report. Use the form below to complete your report. Information such as the number of coins and currency you had at closing time, cash paid out during the day, etc. is provided for you below.

In money drawer at the close of the day you have:

13 Pennies; 7 Nickles; 11 Dimes; 12 Quarters; 2 Half dollars; 25 One dollar bills; 22 Five dollar bills; 10 Ten dollar bills; 7 Twenty dollar bills; 3 Checks totaling $62.23; 22 Credit card slips totaling $303.94; Cash paid out: $24.00; Starting cash in drawer: $45.00; Cash register tape total: $730.75.

The Rainbow Restaurant
712 Pine

CASH REGISTER REPORT

Date ____________________

NUMBER OF EACH DENOMINATION	DENOMINATIONS	TOTAL
	Pennies ($.01)	
	Nickles ($.05)	
	Dimes ($.10)	
	Quarters ($.25)	
	Half dollars ($.50)	
	One dollar bills ($1.00)	
	Five dollar bills ($5.00)	
	Ten dollar bills ($10.00)	
	Twenty dollar bills ($20.00)	
	Checks	
	Credit card slips	
	Total in cash drawer	
	Cash paid out (+)	
	Total Received	
	Starting Cash in Drawer (-)	
	Total receipts from sales	

Total from cash register tape ______________________________

Total cash, checks, credit card slips from sales ______________________________

Cash over ______________________________

Cash short ______________________________

Signed ______________________________

ACTIVITY 33-12

DIRECTIONS: Figure the gratuity for each of the following check totals. Write your answer in the box to the left of the check total.

☐ 1. $15.00
☐ 2. $17.50
☐ 3. $12.24
☐ 4. $32.56
☐ 5. $ 6.46
☐ 6. $25.00
☐ 7. $42.75
☐ 8. $31.63
☐ 9. $11.11
☐ 10. $18.72

☐ 11. $29.45
☐ 12. $46.50
☐ 13. $ 7.47
☐ 14. $19.66
☐ 15. $ 4.75
☐ 16. $23.23
☐ 17. $50.00
☐ 18. $21.01
☐ 19. $ 8.08
☐ 20. $32.00

ACTIVITY 33-13

DIRECTIONS: Read each statement below. If the statement is true, circle the letter T to the left of the statement. If the statement is false, circle the letter F.

T F 1. Under the Fair Labor Standards Act, food service employees working in an establishment grossing more than $350,000 a year must be paid minimum wage.

T F 2. It is appropriate for a waiter or waitress to stand at the table until the guests provide the tip.

T F 3. Food service workers receiving more than $40.00 in tips each month must file Form 4070, Employer's Report on Tips, with their employer.

T F 4. A waiter or waitress should count the tip at the table to make sure it equals 15% of the customer's check.

T F 5. The wage-hour law defines a tipped employee as one who regularly receives more than $20.00 a month in tips.

T F 6. Food service workers should inform customers as to what other customers have been tipping in order to stimulate competition among customers.

T F 7. If an employer collects all tips as part of the gross receipts, that employer must pay his or her employees the full minimum hourly wage.

T F 8. A waiter or waitress should provide the same quality of service for non-tippers as he or she does for those who regularly tip.

T F 9. Food service employees are required by law to report the total amount of tips received on their federal income tax return.

T F 10. If an employer allows his or her employees to keep their tips, the amount of the tips can be deducted from their wages as long as the deducted amount does not exceed 25% of the minimum wage rate.

34

Chapter Thirty-four
Management Responsibilities

COMPETENCIES TO DEVELOP

- Describe personal qualities which lead to job success in food management, production, and services.
- Develop, evaluate, and implement organizational goals, policies, and procedures in the operation of food service.
- Interpret and comply with laws and statutes pertaining to food service establishments.

OBJECTIVES TO ACHIEVE

- Identify personal characteristics needed by a successful food service manager.
- Evaluate the food service operation in terms of organizational goals, policies, and procedures.
- Propose organizational goals, policies, and procedures appropriate for food service operations.
- Determine methods for effective utilization of appropriate goals, policies, and procedures in food service operations.
- Identify laws and statutes most related to food service operations.
- Identify ways to comply with laws and statutes pertaining to food service establishments.

The experience gained as a food service employee provides an excellent background for becoming a manager in a food service establishment. Before setting food service management as a career goal, it is important to learn about the duties and responsibilities of management. The following chapter will help you to gain a better understanding of management responsibilities.

ACTIVITY 34-1

DIRECTIONS: Using a dictionary, textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

employee involvement ______________________________

Employer's Withholding Allowance Certificate (Form W-2) ______________________________

interstate commerce ______________________________

management ______________________________

prevailing wage rate ______________________________

Wage and Tax Statement (Form W-2) ______________________________

wage deductions ______________________________

wage statements ______________________________

Additional Terms

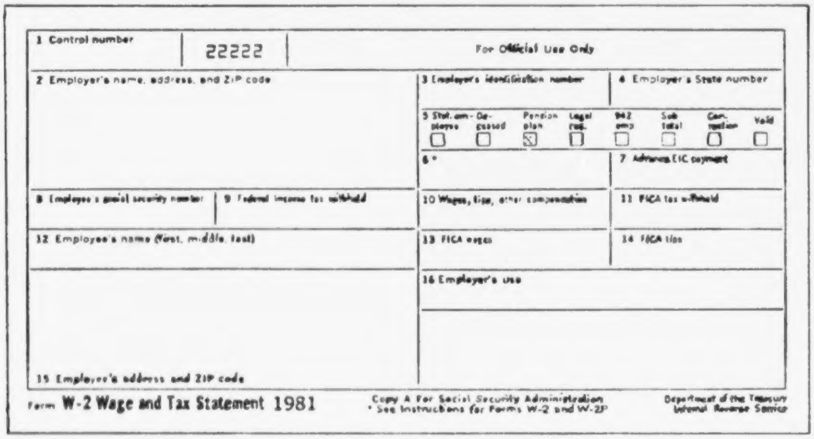
____

____

____

____

____



1 Control number 22222

For Official Use Only

2 Employer's name, address, and ZIP code

3 Employer's identification number

4 Employer's State number

5 Stat. employee ☐ Deceased ☐ Pension plan ☒ Legal rep. ☐ 942 emp ☐ Sub total ☐ Correction ☐ Void ☐

6 *

7 Advance EIC payment

8 Employee's social security number

9 Federal income tax withheld

10 Wages, tips, other compensation

11 FICA tax withheld

12 Employee's name (first, middle, last)

13 FICA wages

14 FICA tips

16 Employer's use

15 Employee's address and ZIP code

Form **W-2 Wage and Tax Statement** 1981

Copy A For Social Security Administration
* See Instructions for Forms W-2 and W-2P

Department of the Treasury
Internal Revenue Service

ACTIVITY 34-2

DIRECTIONS: Complete the following checklist as a self-evaluation of desirable personal qualities which lead to success in food management, production, and services. Place a check in the appropriate column to indicate your answer. Then use the checklist as a basis for evaluating your characteristics for being a food service manager.

	YES	UNSURE	NO
1. Can you accept and delegate responsibility?			
a. Are you able to lead others?			
b. Are you willing to accept responsibility?			
c. Are you willing to let others take responsibility?			
2. Do you work well with people from all cultures and socio-economic levels?			
a. Do you like people?			
b. Do people like you?			
c. Do you enjoy helping others develop themselves?			
d. Are you good at teaching others?			
e. Are you patient?			
f. Do you take pleasure in satisfying your customers?			
g. Are you willing to do the right thing even if it is not the popular thing?			
3. Are you dependable?			
a. Are you healthy?			
b. Are you energetic?			
c. Can you maintain the hours necessary to run a food service business?			
d. Are you a good worker?			
e. Are you willing to put your job ahead of your other interests?			
4. Are you trustworthy?			
a. Are you honest?			
b. Do you have a high moral character?			
c. Do you set a good example for others?			
5. Are you self-motivated?			
a. Are you willing to work hard in order to succeed?			
b. Are you a self-starter?			
c. Can you work without prodding, coaching, or supervision?			
6. Do you appreciate good food?			
a. Do you know what makes food appealing to customers?			
b. Do you know what makes food attractive?			
c. Do you know what makes food taste good?			
d. Are you willing to provide food the way the customer wants it?			

	YES	UNSURE	NO
7. Do you maintain high standards of neatness and cleanliness?			
a. Are you neat and clean in your personal appearance?			
b. Do you stress good housekeeping and food sanitation in your present job?			
c. Do you understand the difference between sanitary and clean?			
8. Are you healthy?			
a. Do you have foot, leg, back, or other health problems that would hamper your job performance?			
b. Do you take proper precautions to keep yourself healthy when working long hours and doing hard work?			
9. Are you reasonably intelligent?			
a. Do you have common sense?			
b. Can you add, subtract, multiply and divide?			
c. Do you pay attention to details?			
d. Can you locate information quickly?			
e. Are you able to make comparisons?			
f. Can you visualize how things should look?			
g. Can you read, write, and speak well?			
10. Are you enthusiastic?			
a. Are you enthusiastic about the food service business?			
b. Are you an inspiration to others when problems occur?			
11. Are you ambitious?			
a. Do you know what your goals are?			
b. Do you stick to tasks you start?			
12. Are you management-oriented?			
a. Are you a good organizer?			
b. Can you make decisions?			
c. Are you able to adapt to change?			
d. Are you innovative?			
e. Are you impartial and objective?			
f. Can you make decisions under pressure?			
g. Can you accept making mistakes, and learn from them?			
13. Are you loyal?			
a. Do you believe in your organization?			
b. Are you confident that the system, or policy in your establishment is correct?			
14. Are you willing to observe company policies?			
a. Even when a task could be done several different ways, are you willing to follow your company's directions for doing it?			

	YES	UNSURE	NO
15. Are you willing and able to work the long hours required in food service?			
a. Are you willing to work when your friends are playing–nights, weekends, holidays?			
b. Are you physically able to work long hours–mostly on your feet and on the go?			

If many of your answers were "yes" and only a few were "unsure" or "no", you are on your way to being a good manager. If you are unsure of some of your abilities, start now to improve your score. If you must answer "no" to many of the questions, perhaps you should rethink your desire to be a food service manager.

ACTIVITY 34-3

DIRECTIONS: Examine your own feelings about organizational goals in a food service establishment. In the space provided, write a short paragraph (in agreement or disagreement) about one of the following statements. Then share your position with classmates. Have them tell you why they agree or disagree with your position.

"The goals of employees are often achieved through working toward the goals of the food service establishment where they are employed."

"A manager's success in achieving organizational goals depends upon the people under his or her authority."

ACTIVITY 34-4

DIRECTIONS: Review organizational goals, policies, and procedures by filling in the blank with the word or words that best complete the sentence. Refer to the list of words below for possible answers.

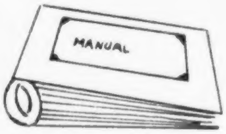
1. ____________________ provide guidelines for operation of a business.
2. ____________________ are the objectives that the food service operation wants or needs to meet to be financially successful.
3. ____________________ provide the method or the means by which policies are carried out.
4. The ____________________ of the organization change with time.
5. Policies and procedures are written and placed in a reference book called a ____________________ manual.
6. New ____________________ should be well-planned before they are implemented.
7. Policies and procedures are developed through the managerial process known as ____________________.
8. ____________________ involvement is the key to effective utilization of an organization's goals.

employee

goals

planning

policies

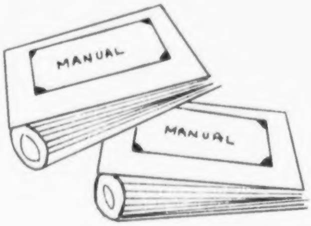


policies and procedures

policy

policy and procedure

procedures



ACTIVITY 34-5

DIRECTIONS: Listed below are the steps of the managerial process known as the planning process. Number the steps in the order in which they should be used when identifying goals, objectives or problems. Place the number in the blank to the left of the step. Use number 1 for the first step of the planning process.

______ A. Select alternative which meets goal, objective, or problem most effectively

______ B. List outcomes (good and bad) for each solution

______ C. Identify goals, objectives, or problems

______ D. Implement the chosen alternative

______ E. List alternative solutions

______ F. Consider alternatives and outcomes

ACTIVITY 34-6

DIRECTIONS: Answer the following items. Write your answers in the space provided.

1. List three sources that a food service manager can use to keep informed of the laws and regulations affecting food service operations. Also list the type of information provided.

   1) Source: ______________________________
   Information: ______________________________
   2) Source: ______________________________
   Information: ______________________________
   3) Source: ______________________________
   Information: ______________________________

2. List three ways the food service manager can keep employees aware of the laws which affect food service operations:

   1) ______________________________
   2) ______________________________
   3) ______________________________

ACTIVITY 34-7

DIRECTIONS: Review the laws and statutes pertaining to food service by matching the law or statue to its description. Place the letter of the law or statute in the blank to the left of its description.

DESCRIPTION

______ 1. Vary by state but meet the Fair Labor Standards Act

______ 2. Govern the minimum age at which minors may be served liquor or work where liquor is served

______ 3. Regulate minimum wages, working hours, equal pay, overtime pay, and child labor

______ 4. Provides benefits to persons injured or killed on the job

______ 5. Establish and enforce standards of sanitation in food service

______ 6. Provide benefits related to retired people and the survivors of wage earners

______ 7. Money collected from employee's wages if wages go above a stated level established by federal law

______ 8. Regulate the age at which minors under the age of 18 may work at food service jobs

______ 9. Provides employee income if the employee loses his/her job and is actively seeking new employment

LAWS AND STATUTES

A. Child labor laws

B. Fair Labor Standards act

C. Income tax

D. Liquor laws

E. Sanitary codes/regulations

F. Social security

G. State labor laws

H. Unemployment compensation

I. Workman's compensation

35

Chapter Thirty-five
Cost Control

COMPETENCIES TO DEVELOP

- Cost menu items, set menu prices of foods, and make changes in menu when needed.
- Prepare market orders, and purchase food and consumable supplies.
- Select, develop, and standardize recipes.
- Plan menus appropriate for type of food service.

OBJECTIVES TO ACHIEVE

- Identify food, labor, and equipment cost-control procedures.
- Identify factors influencing menu preparation.
- Describe factors which affect the establishment of menu prices.
- Describe the method used to standardize recipes.

Cost control. The most effective way to ensure a financially successful restaurant is to instigate strict cost controls. With this in mind the following chapter reinforces the concept of cost control and the importance of menus in controlling costs.

ACTIVITY 35-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

food cost percentages ______________________________

overhead ______________________________

precosted ______________________________

profit forecast ______________________________

rotated menus ______________________________

Additional Terms

____

____

____

____

____

ACTIVITY 35-2

DIRECTIONS: Identify food, labor and equipment cost control procedures by placing T for true or F for false in the space provided to the left of the statement.

_____ 1. The heart of a financially successful enterprise in food service is cost control.

_____ 2. Ineffective cost controls cannot threaten the financial stability of a food service operation.

_____ 3. Receiving and inventorying food are two main areas of concern in food service cost control.

_____ 4. Menus are the framework of cost control in food service.

_____ 5. Menus do not help eliminate the guess-work involved when deciding what to serve and when to serve it.

_____ 6. The only thing a menu is not used for is in helping managers decide what to buy, or solving the "what-to-buy" dilemma.

_____ 7. Menus are fixed or rotated.

_____ 8. In cycle menus, each day has a different menu.

835

ACTIVITY 35-3

DIRECTIONS: Review the factors which effect the planning of a menu by filling in the blanks below. To fill in the blanks refer to each double digit number below each blank. The first number of the double digit number below the blank should be found first in the vertical column of numbers on the left hand side of the key. The second number should be found in the horizontal row of numbers at the top of the key. Trace the line of the two numbers with your fingers until they meet at the point of intersection. This is the letter to write in the blank. Continue this procedure until you complete all of the words in each sentence. Write the sentence on the line provided.

O	1	2	3	4	5
1	A	F	N	T	Y
2	J	B	G	O	U
3	Q	K	C	H	P
4	V	R	L	D	I
5	Z	W	S	M	E

1. 13 25 14 42 45 14 45 24 13 11 43 13 55 55 44 53 24 12

33 25 53 14 24 54 55 42 53

____

2. 13 55 55 44 53 11 13 44 44 55 53 45 42 55 53 24 12

33 25 53 14 24 54 55 42 53

____

3. 14 15 35 25 24 12 12 24 24 44 24 42 54 55 11 43

53 55 42 41 45 33 55

____

4. 43 45 54 45 14 11 14 45 24 13 53 24 12 55 31 25 45 35 54 55 13 14

____

ACTIVITY 35-4

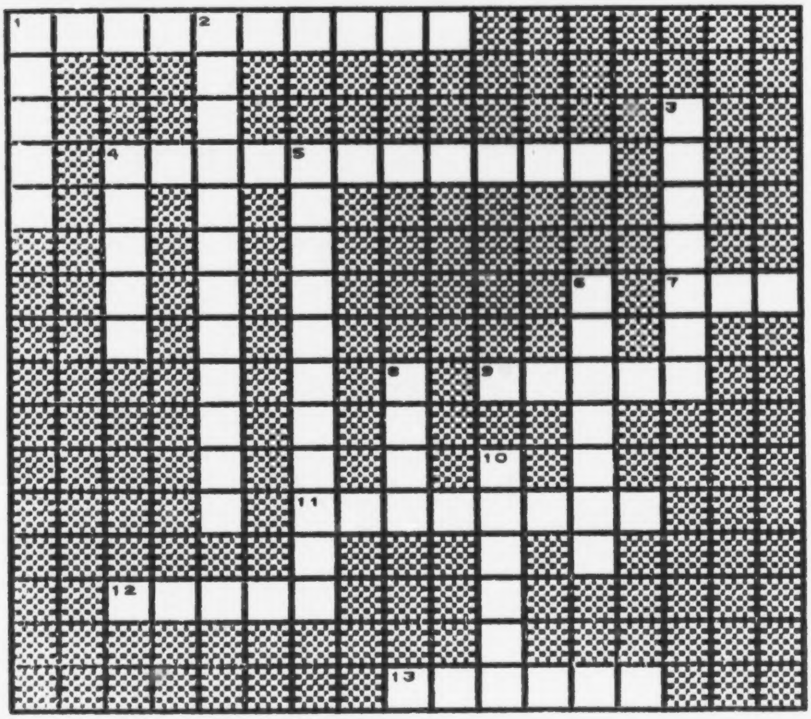
DIRECTIONS: Describe factors which affect the establishment of menu prices by unscrambling the words below. Place the unscrambled word in the box with the corresponding number. After each numbered box has a factor in it, go to the next blank box (no number) above or below the numbered box and write an explanation or description of how the factor affects the establishment of menu prices.

1. LBARO TSSOC
2. HODEAVER
3. DOFO SOCTS
4. FODO CIVESER NIOPATERO
5. PAINCTITADE FRIPTO
6. VENRROTU
7. A AL RATEC
8. ELBAT D EOTH

1		5	
	4		8
2		6	
	3		7

ACTIVITY 35-5 **DIRECTIONS**: To identify methods used to standardize recipes, complete the following crossword puzzle.

STANDARDIZED RECIPES



ACROSS CLUES

1. List the steps of _ _ _ _ _ _ _- _ _ _ _ _ in the order they are done.
4. Use accepted _ _ _ _ _ _ _ _ _ _- _ _ _ understood by food service employees.
7. Portion yield increments should be provided in _ _ _ of the more common increments usually served.
9. Ingredients should be listed in the form and the _ _ _ _ _ _ in which they will be used.
11. For ease in storage and location, recipes should be _ _ _ _ _ _ _ _ _.
12. Attach _ _ _ _ _ over production tables to keep card up and out of the way of the worker.
13. Recipes should be translated into the food service worker's _ _ _ _ _ _ language if other than English.

DOWN CLUES

1. Be as specific as possible, avoiding phrases such as "just a _ _ _ _ _" when writing recipes.
2. Except for standard measurements, instructions should be written out completely without _ _ _ _ _ _ _- _ _ _ _ _.
3. _ _ _ _ _ _ _ ingredients that are to be mixed or prepared together.
4. Recipes should be _ _ _ _ _ and sealed in a plastic sheath when given to a food service worker.
5. The steps of a procedure should be listed next to the _ _ _ _ _ _ _ _- _ _ _ _.
6. Recipes need to be checked, reviewed, and _ _ _ _ _ _ _ _ periodically.
8. List the items first, then the _ _ _ _.
10. List all measurements by _ _ _ _ _ _; they are easier to follow and are more accurate than measured units.

36 Chapter Thirty-six
Buyers, Receivers, and The Storeroom

COMPETENCIES TO DEVELOP

- Contact purveyors, and compare food prices.
- Direct stockroom activities.
- Take inventories of food, utensils, and equipment.
- Utilize food, labor, and equipment cost control procedures.

OBJECTIVES TO ACHIEVE

- Determine effective methods for purchasing food and consumable supplies.
- Develop an effective and efficient method of conducting stockroom activities.

Two areas in the food service establishment that must not be neglected by food service management are purchasing and inventorying. The following chapter will help you to better understand the importance of each.

ACTIVITY 36-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

full-line purveyors ______________________________

purchase specifications ______________________________

requisition form ______________________________

Additional Terms

____

____

____

____

____

ACTIVITY 36-2

DIRECTIONS: Check your understanding of purchase specifications by matching each type of specification with its use. Place the letter of the specification in the blank to the left of its use.

USE

______ 1. Includes specifications for weight, count, size, pack, style, degree of ripeness, etc.

______ 2. Tells number of usable portions of the amount purchased.

______ 3. Gives seasonal price variations, peak demand periods, quality variations and overall serving costs.

______ 4. Aids in choosing an amount that can be used in a reasonable period of time without waste.

______ 5. Ensures that product is healthful and nutritious.

______ 6. Classifies foods by a descriptive term or a number to ensure uniform quality.

SPECIFICATIONS

A. Container sizes

B. Financial Factors

C. Grade

D. Other

E. Use of product

F. Wholesomeness

G. Yield

ACTIVITY 36-3

DIRECTIONS: Review effective and efficient methods of conducting stockroom activities by making a list of important rules to remember when safeguarding the storeroom, issuing food and supplies, and inventorying.

1.

2.

3.

4.

5.

6.

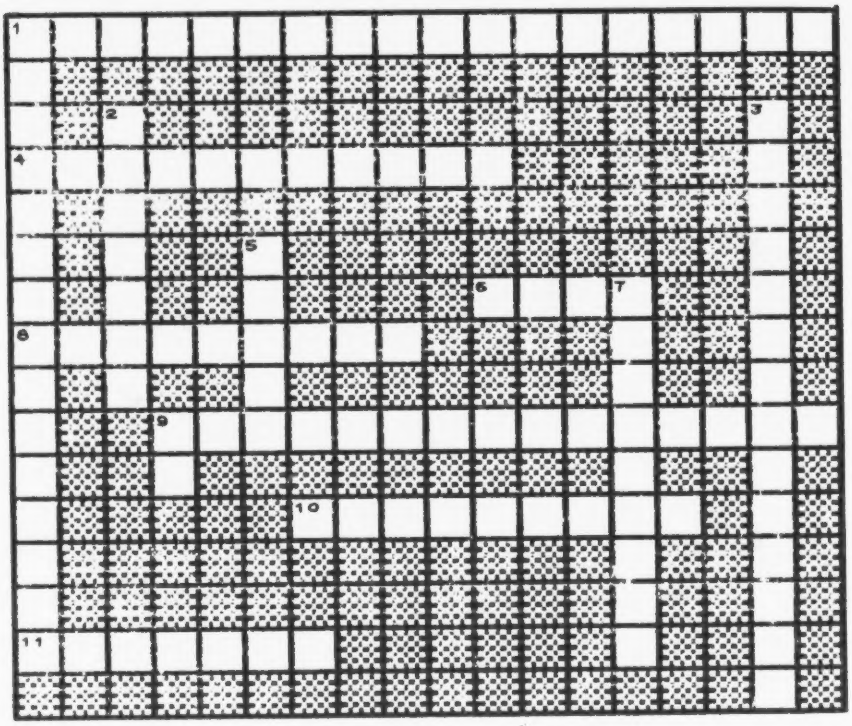
7.

8.

ACTIVITY 36-4

DIRECTIONS: To review the terms related to buyers, receivers, and the storeroom, complete the crossword puzzle below by answering the Across and Down Clues below the puzzle.

BUYERS, RECEIVERS, AND THE STOREROOM



ACROSS CLUES

1. When standardized recipes are used, purchase specifications can be developed and put on ___ ___ ___ ___ ___ ___ ___ ___ ___-___ ___ ___ ___ ___ ___ ___ ___ ___.
4. The most common ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ are 2/10: NET 30.
6. The size or type of container in which food is sold is the ___ ___ ___ ___.
8. Type of suppliers who are not vendors or dealers, but ___ ___ ___ ___ ___ ___ ___ ___ ___.
9. The person who is in charge of buying food and supplies might be referred to as a ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___.
10. The ___ ___ ___ ___ ___ ___ ___ ___ ___ is the price paid for one unit.
11. The person who is in charge of buying food and supplies might also be referred to as a ___ ___ ___ ___ ___ ___ ___.

DOWN CLUES

1. Sometimes called credit terms, these ___ ___ ___ ___ ___ ___ ___ ___ ___ ___-___ ___ ___ ___ ___ offer an incentive to the prompt manager.
2. Not purveyors, not vendors, but ___ ___ ___ ___ ___ ___ ___, another type of supplier.
3. The person who does the count and weight check on incoming merchandise might be referred to as the ___ ___-___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___.
5. The person who is in charge of buying food and supplies is called a steward, or simply a ___ ___ ___ ___ ___.
7. ___ ___ ___ ___ ___ ___ ___ ___ ___ is the price for the amount ordered.
9. The form used to order food and supplies is known as a purchase order, or more commonly as a ___. ___.

37

Chapter Thirty-seven
Finances and Recordkeeping

COMPETENCIES TO DEVELOP

- Prepare and maintain records, correspondence, and forms.
- Plan and analyze finances, costs, and sales.

OBJECTIVES TO ACHIEVE

- Identify factors affecting financial stability of food service operations.
- Describe financial and employee records needed in food service operations.
- Analyze financial records to determine the financial status of food service operations.
- Identify ways in which computers are being used in food service.
- Determine factors to consider when selecting a computer system for food service.

Accounting and recordkeeping, budgeting, cost control, and money handling are important parts of the food service establishment's control system. However, trained bookkeepers and accountants are usually employed for these tasks. A food service manager should be familiar with accounting procedures to assure control of the financial health of the food service operation.

ACTIVITY 37-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

accounts payable ______________________________

accounts receivable ______________________________

assessed value ______________________________

assets ______________________________

balance sheet ______________________________

break-even analysis ______________________________

computer applications ______________________________

current assets ______________________________

depreciation ______________________________

documentation ______________________________

employee schedules ______________________________

fixed assets ______________________________

fixed costs ______________________________

gross profit ______________________________

hardware ______________________________

integrated software program ______________________________

liabilities ______________________________

net profit ______________________________

occupational expenses ______________________________

owner's equity ______________________________

primary expenses ______________________________

real estate or property taxes ______________________________

sales tax ______________________________

tax rate ______________________________

time cards or time records ______________________________

total assets ______________________________

variable costs ______________________________

Additional Terms

____

____

____

____

ACTIVITY 37-2

DIRECTIONS: Read the following situations where the financial stability of a food service operation has been affected. Identify the problem in each situation and then determine a possible solution for each problem. Write your answers in the space provided.

1. The manager of Hungry Time Restaurant likes to keep seven cooks and twenty waitresses employed. Since the restaurant is always so busy, the manager feels the need to pay the employees more than most other restaurants; however, at the end of the month there is little profit for the restaurant.

PROBLEM: ____

POSSIBLE SOLUTION: ____

2. Joe is the manager of a family restaurant which has been open three months. Business has not been going well and Joe does not understand why. He has hired the best cooks in town and the prices are low, but the customers are just not coming in.

PROBLEM: ____

POSSIBLE SOLUTION: ____

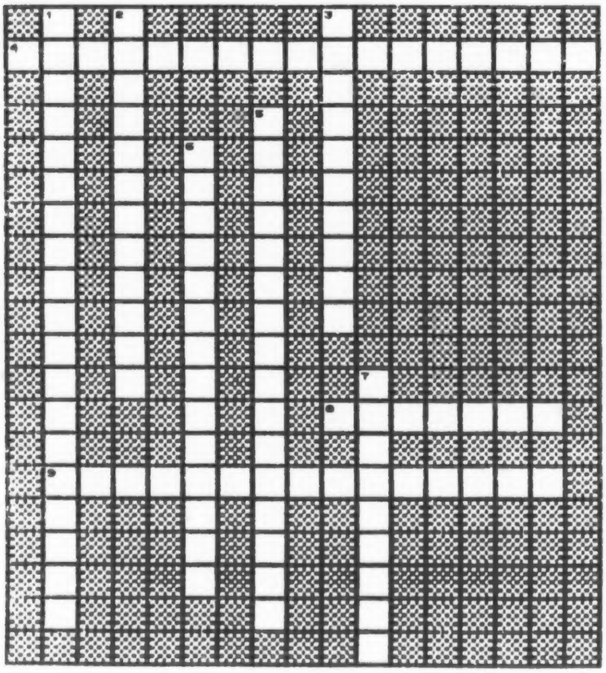
3. Miss Rappi has been transferred to a restaurant across town as a new manager. When she began looking over the records she found that the restaurant had been losing money. When she inventoried the kitchen she found an abundance of food and supplies and noticed that some of the foods were beginning to spoil. This really puzzled her because the restaurnt was always so busy.

PROBLEM: ____

POSSIBLE SOLUTION: ____

ACTIVITY 37-3 **DIRECTIONS**: Fill in the crossword puzzle using the clues related to financial and employee records needed in food service.

FINANCIAL AND EMPLOYEE RECORDS



ACROSS CLUES

4. Determines where income and expenses will equal.
8. What must be obtained and maintained to serve food and beverages.
9. Must be kept for tax and insurance purposes.

DOWN CLUES

1. Compares cost of food purchased, sold, and operating expenses against total sales.
2. Tells what the operation owns and owes.
3. Important to represent a substantial portion of the food service operation expenses.
5. Aids in the distribution of labor in a fair and equitable manner.
6. Includes total earnings, tips reported, and social security taxes withheld from each employee.
7. Records number of hours worked and time taken off by the employee.

ACTIVITY 37-4

DIRECTIONS: Read the following case study and then complete the balance sheet using the information from the case study.

Ed and Christine Steven plan to open their restaurant, Toby's Place, next week. To supplement their own $9,300 investment in the business they have obtained a loan for $17,000 to cover their initial start-up costs. The start-up capital has been spent on a $750 remodeling job which has made the building more convenient for a restaurant, $4,300 for a used truck to deliver phone-in orders, $7,437 for stationary kitchen equipment, $2,641 for hand kitchen equipment, $3,489 for dining room furniture and fixtures, and $2,178 for tableware, glassware, flatware, and linens. Of the remaining $5,194, $2,157 has been reserved for initial inventory such as food and beverages and an additional $650 will be spent on supplies. Everything else will be maintained for emergencies and ongoing expenses.

Ed is still paying for the family trailer and makes a payment of $278 each month. He has also figured up the monthly bills at home: $179 for gas, electric, and water; $86 for insurance and taxes; and $98 for the pets. Christine and Ed want to remodel the master bathroom. If she and Ed do the work she figures the remodeling will cost about $2900 (give or take $150).

The Stevens plan to repay half of the original loan on the restaurant by the end of the first year. This is based on their expectation for taking in an average of $4,500 each month of the business' first year. In addition to phone orders, an area for banquets and private parties will be of service. The Stevens have already obtained an arrangement with local businesses for special occasions.

Christine has arranged with one supplier for the immediate delivery of fresh fish to coincide with the opening of the shop. The supplier has offered to let the Stevens have the merchandise on credit, so even before the business has opened, the restaurant has a trade debt of $200.00 for the fresh fish. Since Ed and Christine have invested everything they have in the business, they are anxious for the business to be a success. Ed wants you to prepare a balance sheet to determine exactly where the business stands financially at the time the restaurant opens (a blank balance sheet is provided on the following page).

BALANCE SHEET
for
TOBY'S PLACE

Assets

Current Assets

Cash ______________________

Accounts Receivable ______________________

Inventory ______________________

Total Current Assets ______________________

Fixed Assets

Property ______________________

Equipment ______________________

Property Renovation ______________________

Total Fixed Assets ______________________

Liabilities

Trade Debt ______________________

Bank Debt ______________________

Other Debt ______________________

Total Liabilities ______________________

Owner's Equity ______________________

Total Liabilities and Owner's Equity ______________________

ACTIVITY 37-5 **DIRECTIONS**: Complete the profit and loss statement for Seaside Restaurant by using information found in the following case study.

The owners of Seaside Restaurant want to prepare a profit and loss statement for their business. As all the figures for the year were accumulated the total sales through the month of November were $840,400 with the total sales for the month of December being $76,400. Their inventory at the beginning of the year was $103,200. During that same month, Seaside Restaurant made purchases that totaled $25,700 in addition to the $282,700 worth of purchases made that year. The final inventory at the end of the year totaled $101,400. The total amount paid to meet the payroll was $194,400. The Seaside Restaurant's rent and utilities for the year totaled $12,780 and $16,308 was paid in taxes and insurance. Additional expenses included $1800, advertising; $6,564, repairs and maintenance; and $2,340, laundry and linens.

PROFIT AND LOSS STATEMENT
for
Seaside Restaurant

Total Sales: ____________

Food cost:

Inventory at the beginning of year ____________

Food purchases during the year ____________

Total ____________

Less: Final Inventory ____________

Cost of Food Sold ____________

Gross Profit ____________

Expenses

Salaries ____________

Other Expenses ____________

Total Operating Expenses ____________

Net Profit ____________

ACTIVITY 37-6

DIRECTIONS: Identify the ways in which computers are being used in food service by answering the following questions.

1. What are three possible applications of a computer in hospital food service operations?

2. What are the two most common uses of computers in food service?

3. List four things computerized cash registers can keep track of:

4. What is the purpose of tying cash registers from several food service operations to a bigger central computer?

5. What are the seven accounting purposes that the computer may be used for in food service?

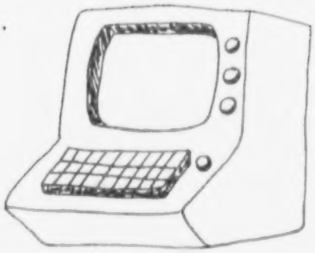
6. What are three programs of the newer food service applications?

Emy

ACTIVITY 37-7

DIRECTIONS: For six months, you have been working as an assistant manager at a restaurant which is part of a small restaurant chain. The business has been growing and the manager has decided to purchase a computer system for the business. Since there is such a wide variety of hardware and software available, and it will be fairly expensive, the manager is asking you and fellow-assistant managers for some input. In the space provided, write ten guidelines that you could suggest to follow when selecting computer hardware or software for the food service establishment.

1. ____
____
2. ____
____
3. ____
____
4. ____
____
5. ____
____
6. ____
____
7. ____
____
8. ____
____
9. ____
____
10. ____
____



38

Chapter Thirty-eight

Personnel and Production Management

COMPETENCIES TO DEVELOP

- Identify procedures used to plan, interview, hire, evaluate, and discharge staff.
- Train personnel, and enforce policies of personal hygiene, sanitation, and safety.
- Prepare work schedules and job assignments.
- Evaluate use, cost, ease of preparation, and aesthetic qualities of foods.
- Plan, coordinate, and supervise production.
- Set production standards.
- Control and improve sequence of operations.
- Schedule food preparation tasks.

OBJECTIVES TO ACHIEVE

- Outline procedures for hiring and training new employees.
- Describe techniques for developing and coordinating work schedules and assignments.
- Identify factors that influence the development of work schedules and assignments.
- Outline procedures for firing or laying off employees.
- Describe methods for controlling labor costs in food service.
- Determine the benefits derived from effective methods of production and quality control in food service.

One of the most important elements in a successful food operation is the staff. Time and effort are required to recruit, hire, and train food service workers. Once employed, these workers are keys to cost controls, maintaining quality control systems, and developing and maintaining good customer relationships.

ACTIVITY 38-1

DIRECTIONS: Using a dictionary, your textbook, or other references, build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief definition. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

irregular scheduling ______________________________

job descriptions ______________________________

orientation ______________________________

personnel management ______________________________

production schedule ______________________________

regular scheduling ______________________________

split-shift scheduling ______________________________

staffing tables ______________________________

task analysis ______________________________

Additional Terms

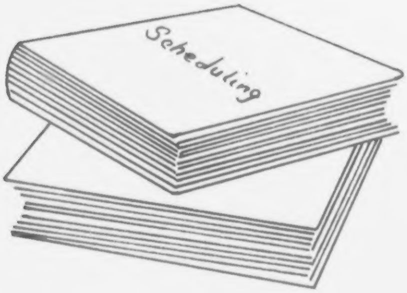
____

____

____

____

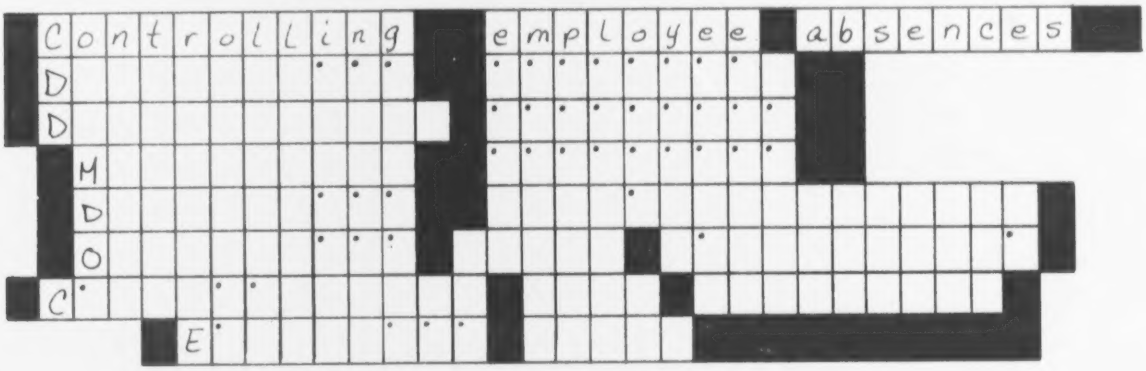
____



853

ACTIVITY 38-2

DIRECTIONS: To review eight of the responsibilities included in personnel management, complete the puzzle below. The first responsibility, Controlling employee absences, has been filled in for you. Also, the beginning letter of the remaining 7 responsibilities has been filled in. Finally, many of the boxes have a • in the upper left hand corner. Whenever you come to a box with a • in it simply copy the letter from the box above the •. Hint: if you have trouble the eight responsibilities of personnel management are listed (in scrambled order) below the puzzle.



Organizing staff assignments	Enforcing rules
Delegating responsibilities	Disciplining employees
Motivating employees	Controlling employee absences
Communicating with employees	Discharging employees

ACTIVITY 38-3

DIRECTIONS: When writing job descriptions, food service managers should consider future changes which may affect the position. Write a short paragraph, explaining how one of the following might affect an employee's job description: purchase of new equipment, menu changes, variations in customer tastes and patronage, or more effective production techniques.

ACTIVITY 38-4

DIRECTIONS: Listed below are procedures for hiring, orienting, training, and retraining employees. Match each procedure to the correct term by placing the appropriate letter in the blank to the left of each procedure.

H = Hiring O = Orientation T = Training R = Retraining

______ 1. Worker is informed about benefits such as vacation, sick leave, meals, and insurance.

______ 2. Employee is given an explanation of why training is needed.

______ 3. A tour of facility is provided.

______ 4. Positive and pleasant aspects are stressed using praise and ego building techniques.

______ 5. Applicant is matched with jobs available.

______ 6. Is appropriate when procedures change.

______ 7. Sanitation, safety, rules, and regulations are explained.

______ 8. Competitive wages and benefits are offered.

______ 9. Careful screening with reference checks are conducted.

______ 10. Worker is allowed to help set goals.

______ 11. Questions are encouraged.

______ 12. Takes place when new facilities are opened.

______ 13. Employee is shown how to perform tasks.

______ 14. Worker is shown where to obtain food, supplies, tools, and equipment needed.

______ 15. Previous experience, personal hygiene, and personality are considered.

______ 16. Occurs when new equipment is purchased.

______ 17. Sessions are kept from fifteen to twenty minutes each.

______ 18. Person's ability to learn tasks of job are perceived.

______ 19. Is preferable to teach or complete task in one session.

______ 20. Time is allowed for practice.

______ 21. Employer's personal likes and dislikes should not be an influence.

______ 22. Employees must have or acquire skills needed.

______ 23. Tasks are introduced in order of which they are completed.

______ 24. Employee is introduced to the job to be done.

______ 25. Needs and aspirations are considered for determining work load.

______ 26. Introduction to co-workers and supervisors is given.

______ 27. Record of interview is kept.

853

ACTIVITY 38-5

DIRECTIONS: Unscramble the techniques used for developing and coordinating work schedules and place the correct form of the words in the squares provided. When you have unscrambled all the techniques, write a description of each in the spaces below.

B A L R O   S T O C   G E D T U B S

R L E G R R I A U   D E C H I S L U N G

L I S T P - F I S T H   S H I N G E L D U C

S U E   F O   G I F T F A N S   B L E T A S

E U S   F O   A P T R - M E I T   S O K R R E W

ACTIVITY 38-6 **DIRECTIONS**: Read each of the following statements related to personnel and production management and answer them in the space provided.

1. When developing work schedules, food service managers must be aware of several factors which influence the scheduling of employees. List five.

2. Listed below are three types of job separations. Write a brief description of each.

   Firing

   Layoffs

   Voluntary separation or quitting

3. What is the purpose of an exit interview?

ACTIVITY 38-7

DIRECTIONS: Labor costs may be reduced by using one or more of the techniques listed below. Check your understanding of each technique by matching the descriptions with the proper technique. Put the number of the correct technique in the small square space in each lettered square. If all your answers are correct, the total of the numbers will be the same in each row, across and down. If you do not get the same total each way, check for your mistakes. Write the number (the sum of the numbers for one row or column) in the space provided.

Techniques

1 = PRODUCTION SCHEDULE

2 = JOB DESCRIPTIONS

3 = WORK SIMPLIFICATION TECHNIQUES

A	B	C	D	E
F	G	H	I	J
K	L	M	N	O
P	Q	R	S	T
U	V	W	X	Y

TOTAL = ______________

Descriptions

A. Provides a record of foods prepared for a meal.

B. Makes use of a job analysis to identify the tasks performed by each worker.

C. Reschedules workers to meet demands at peak and slow periods.

D. Aids manager in planning the use of leftovers.

E. Helps to increase the likelihood of employee satisfaction.

F. Needs a completed job and task analysis.

G. Saves steps by rearranging equipment, kitchen, and service areas.

H. Keeps track of number of customers served.

I. Helps to eliminate or re-assign certain tasks.

J. Helps determine what items may be profitable for the food service operation.
K. Should be used in all tasks.
L. Make use of past records to decide how many servings of each menu item should be provided.
M. Aids in selecting the best person for a job.
N. Records any variation in the yield when recipes are prepared.
O. Helps make the hiring process more effective.
P. Explains the requirements and responsibilities of a job.
Q. Makes use of interviews and observations.
R. Determines the best way to utilize available labor.
S. Uses machinery to replace or assist workers.
T. Keeps track of the amount of food left over.
U. Shows the number of servings to prepare for each meal.
V. Aids in determining which items will be popular in the food service operation.
W. Makes use of a task analysis to identify the steps performed in each task.
X. Makes use of questionnaires to gather necessary information.
Y. Encourages employees to help find ways to save time and energy and to work together.

ACTIVITY 38-8

DIRECTIONS: Listed below are five benefits of production and quality control. Briefly explain how each is beneficial to a food service operation.

1. Establishment of standards

2. Establishment of high production and quality levels for employees to model

3. Good public relations

4. Increased customer satisfaction

5. Support for other cost control systems

39 Chapter Thirty-nine
Merchandising and Public Relations

COMPETENCIES TO DEVELOP

- Arrange, design, and interpret menu sheets or folders.
- Evaluate use, cost, ease of preparation, and aesthetic qualities of foods.
- Apply merchandising techniques to ensure profit.
- Plan and conduct advertising and promotional programs.
- Handle complaints and human relations problems.

OBJECTIVES TO ACHIEVE

- Analyze procedures for effective marketing programs.
- Describe factors that affect the merchandising of the food service operation.
- Discuss common and profitable merchandising techniques.
- Discuss the relationship between advertising and promotional programs and public relations.
- Summarize techniques used to handle complaints and human relations problems.

In today's marketplace, it is a rare food service operation that is financially successful without some type of merchandising. The food service manager must understand marketing strategies, how to use them effectively, and how a well-planned merchandising program can boost sales and foster good public relations.

ACTIVITY 39-1

DIRECTIONS: Using a dictionary, your textbook, or other references build your vocabulary by defining the words listed below (context of definitions should be the same as used in the chapter). For each word write a brief defintion. As you continue to read the chapter build your vocabulary further by listing and defining additional terms that are new to you.

advertising ____________________

clip-ons ____________________

customer suggestion or comment card ____________________

demographic factors ____________________

merchandising ____________________

objective task method ____________________

promotions ____________________

publicity ____________________

public relations ____________________

showmanship ____________________

table tents ____________________

target market ____________________

Additional Terms

____

____

____

____

____

ACTIVITY 39-2

DIRECTIONS: Check your understanding of marketing programs by matching the marketing procedure to the marketing characteristics. Place the letter of each procedure in the blank to the left of the characteristic.

CHARACTERISTICS

______ 1. potential customers
______ 2. advertising
______ 3. food
______ 4. color and design
______ 5. newspapers
______ 6. point of purchase sales
______ 7. type of food service operation
______ 8. campaign objectives
______ 9. radio
______ 10. credit cards
______ 11. service
______ 12. materials
______ 13. budget to be used
______ 14. television
______ 15. prices
______ 16. size
______ 17. magazines
______ 18. potential customer characteristics
______ 19. food service personnel
______ 20. media
______ 21. promotions
______ 22. surroundings
______ 23. clip-ons
______ 24. format
______ 25. message
______ 26. effectiveness evaluation
______ 27. text
______ 28. direct mail
______ 29. showmanship
______ 30. publicity

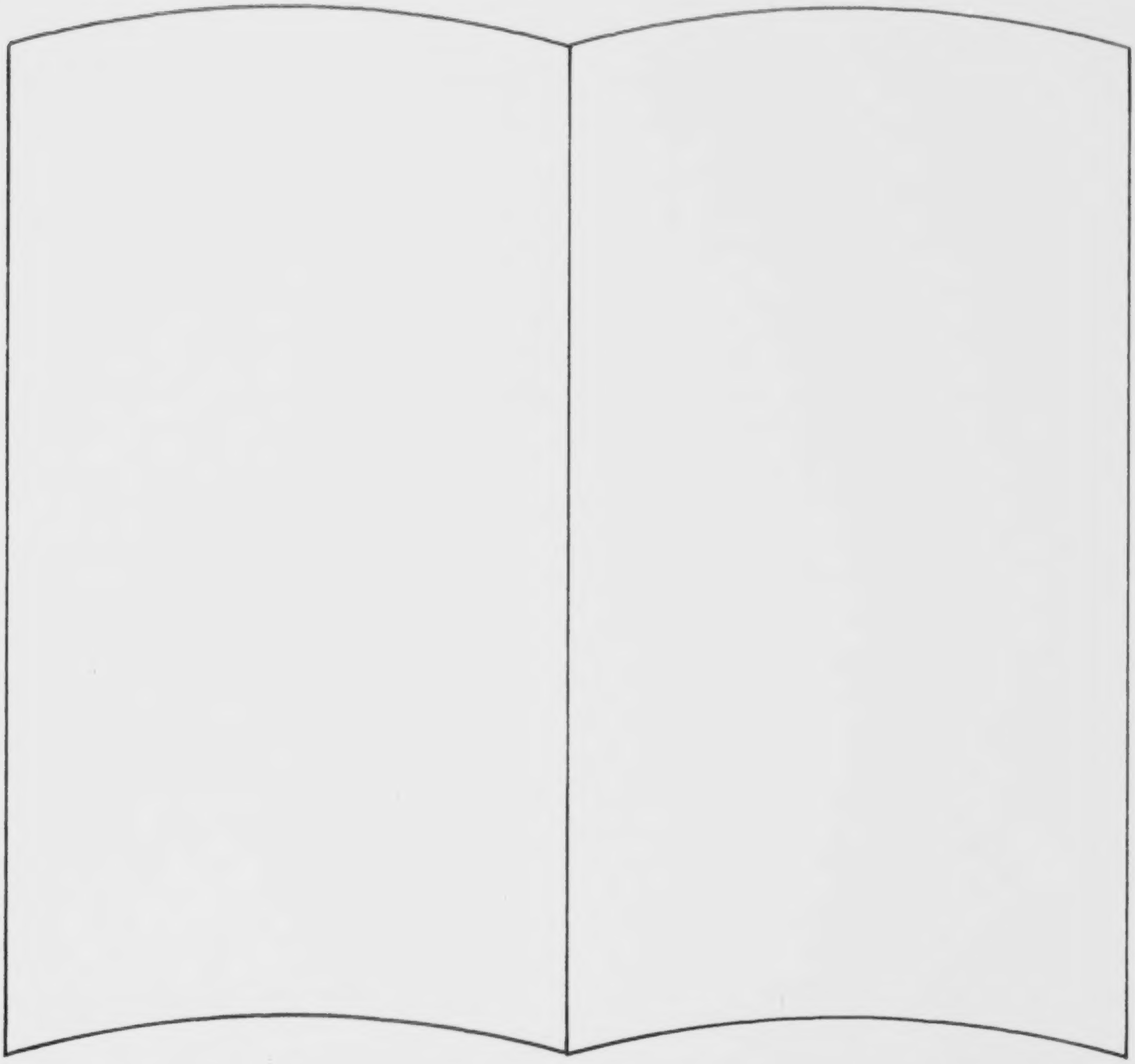
MARKETING PROCEDURES

A. advertising process
B. food merchandising method
C. form of advertising
D. market study step
E. merchandising technique
F. menu format factor
G. operation products

ACTIVITY 39-3

DIRECTIONS: When a menu is presented to a customer it can act as a powerful merchandising tool. Menus are as varied as the food service operation they represent and they can be created in a variety of forms. Menus can be printed, mimeographed, or handwritten. Some are written on chalkboards or wooden planks. Whatever form is used, the menu should be clean, readable, limited to a reasonable number of items, organized so items can be relocated quickly, written in language customers can understand (descriptive, but simple), easy to change as prices or items change, in line with budget, designed to sell the items you want to sell, and planned to fit the operation. Create your own menu in the space provided keeping the above criteria in mind. When you have created your menu, evaluate the menu by completing the checklist.

CREATE A MENU



EVALUATE THE MENU

Evaluate the menu you have just created by placing a check mark (✓) in the appropriate column. Then answer the questions which follow the checklist.

Menu is:	Meets the Requirements	Could be Better	Should be Redesigned
1. clean			
2. readable			
3. limited to a reasonable number of items			
4. organized so items can be relocated quickly			
5. written in a language that customers can understand			
6. descriptive, but simple			
7. easy to change as prices or items change			
8. in line with budget			
9. designed to sell items that you want to sell			
10. planned to fit the food service operation			

Look at your answers on the checklist and answer the following:

Does your menu make use of all the above criteria? ____________________

What are the strengths of your menu? ____________________

____

____

What are the weaknesses of your menu? ____________________

____

____

State a plan for improving the menu: ____________________

____

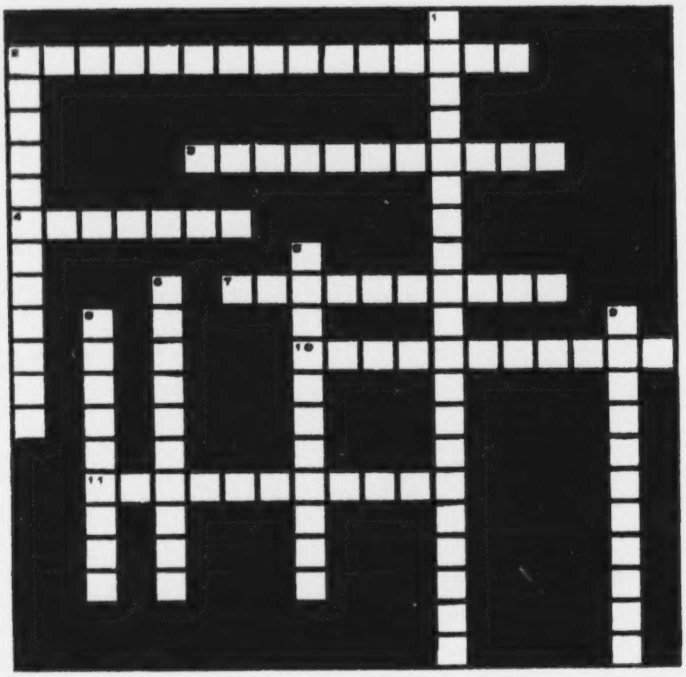
____

____

ACTIVITY 39-4

DIRECTIONS: Listed below are descriptions of factors and techniques used in merchandising a food service operation. Complete the crossword puzzle by filling in the correct term for each description in the clues.

MERCHANDISING



DOWN CLUES

1. Can increase the sale of food and beverages by being taught to "sell through suggestion."
2. Study of the food, service, price and surroundings of a food service operation.
5. Technique used for helping customers air their opinions about the quality of food and service.
6. Folded cards which stand on the table.
8. Media attention drawn to the food service operation.
9. How the business lets customers know where the food service operation is and what it has to offer.

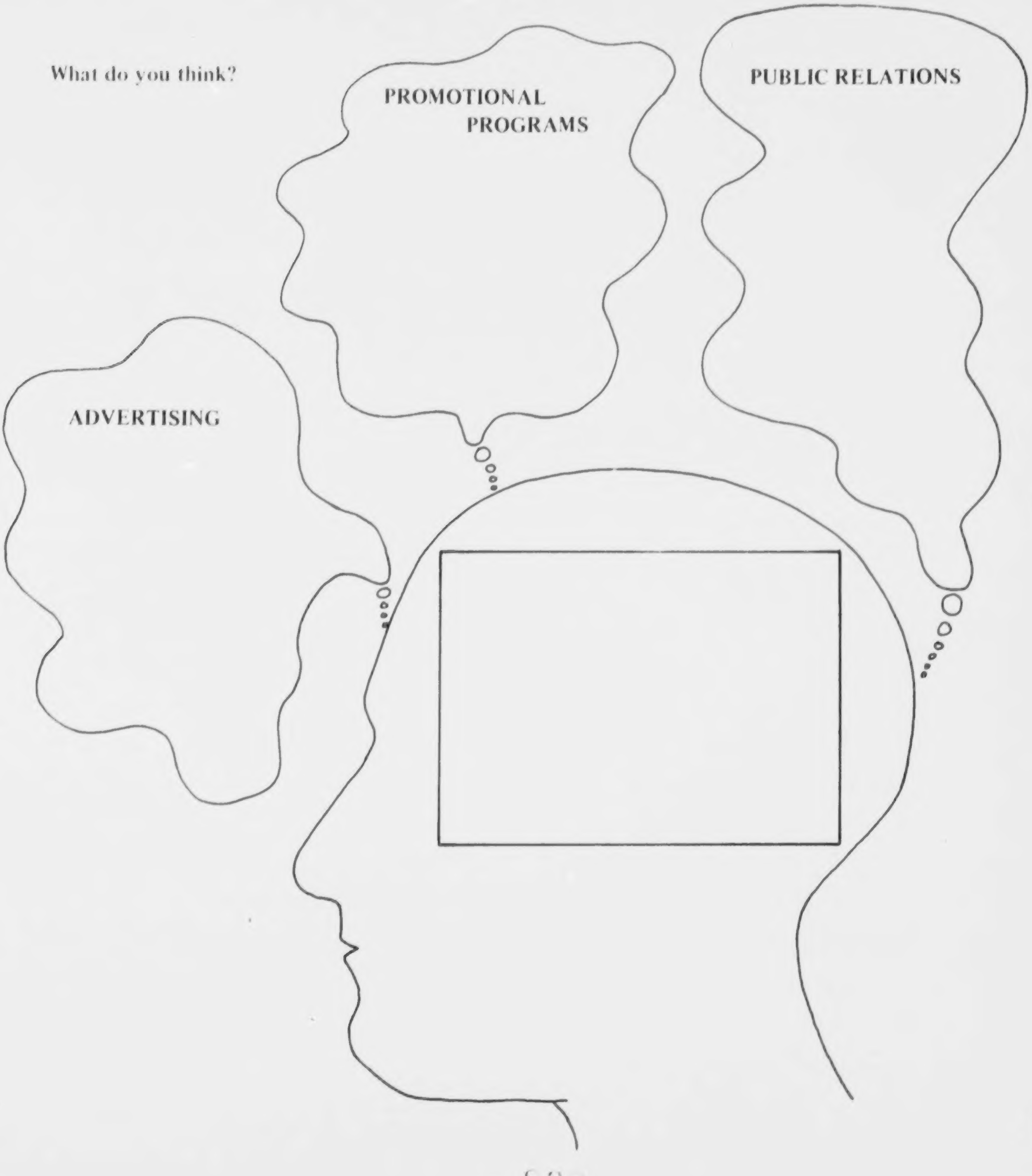
ACROSS CLUES

2. The measures a business takes to win community respect.
3. Special ways of presenting foods to a customer.
4. Sheets attached to the menu to sell a special item.
7. Used periodically to attract customers.
10. Finds out who is buying or might buy a product.
11. Restaurants accept these to promote sales.

ACTIVITY 39-5

DIRECTIONS: Given below are three merchandising techniques used in food service operations. Write a description of each technique in the "thought clouds" below. When you have described the techniques, write your interpretation of the relationship between the three techniques in the box provided.

What do you think?


PROMOTIONAL PROGRAMS
PUBLIC RELATIONS
ADVERTISING

ACTIVITY 39-6

DIRECTIONS: Answer the following questions about techniques used to handle customer complaints. A sample of a customer comment card is shown below to help you answer the questions.

"Something Making You Unhappy?"

Happy
Time
Restaurant

Please Rate	Excellent	Satisfactory	Unsatisfactory
Service		X	
Food	X		
Cleanliness			X

Date: 3/27

Time: 9^{00} p

Server: Jo

Additional Comments: Our bowling team comes in every week. We love the food and your prices are great but we have noticed that it is hard to find a clean table. There is always trash such as napkins and straws laying around the floor. We would be much happier in a tidier restaurant!!!

1. What should you, as a manager, do with several of these cards expressing similar feelings?

2. What is this customer's overall opinion of the food service operation? Why?

3. Referring to the comments on the card, what are two reasons for incorporating this customer's suggestions into the food service operation?

1)

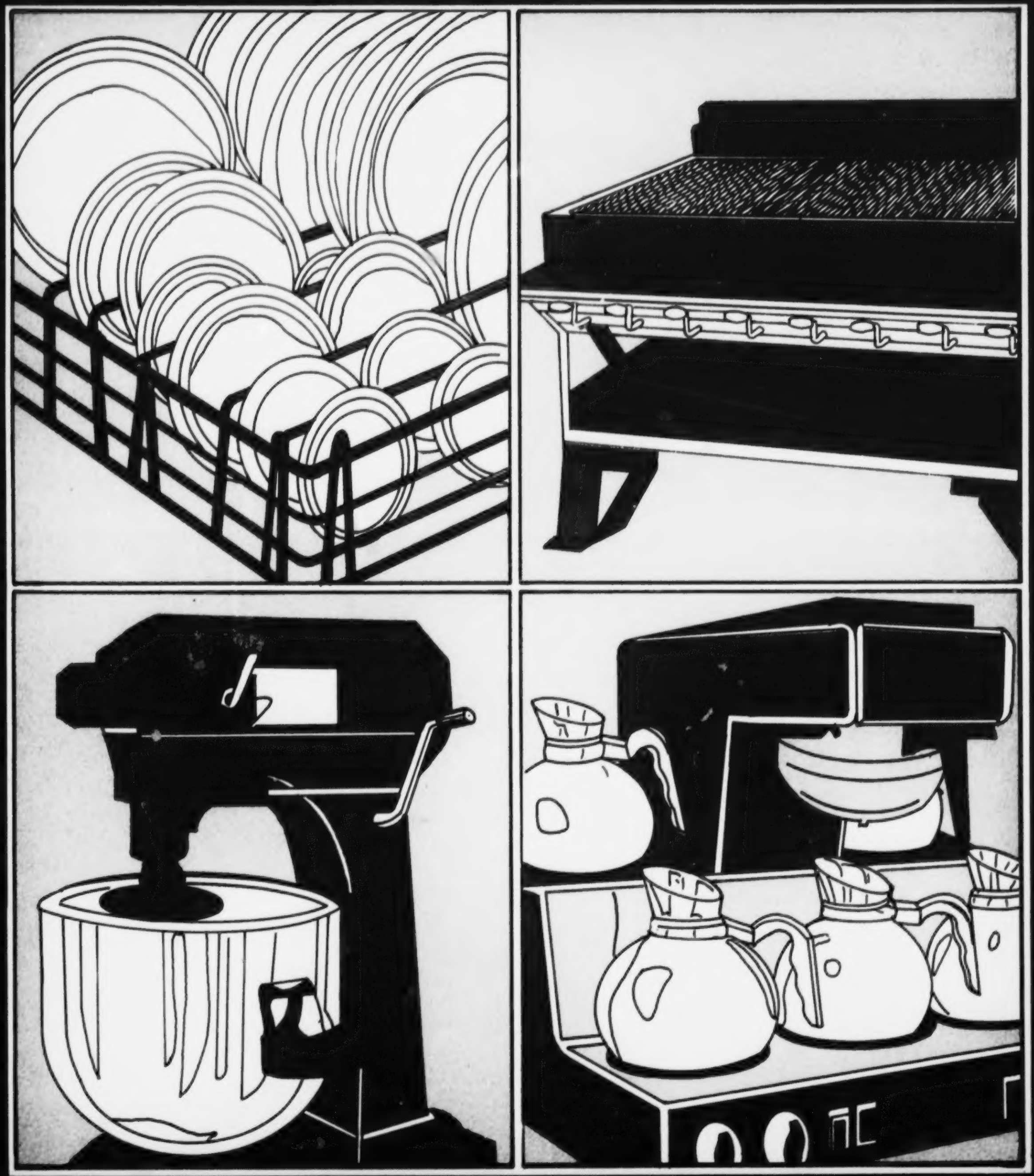
2)

4. Who makes the final decision concerning changes to be made in the food service operation?

5. What should you do if a customer becomes loud and disruptive when voicing a complaint?

Food Production, Management, and Services

Student Aid Book



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Student Aid Book

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Table of Contents

Page

Preface vi

Acknowledgments viii

1–The Food Service Industry 1
ACTIVITIES 3

2–Food Service Careers 4
ACTIVITIES 6

3–Safety 7
ACTIVITIES 9

4–Emergency Procedures 11
ACTIVITIES 14

5–Personnel, Equipment, and Facility Sanitation 15
ACTIVITIES 18

6–Food Sanitation 19
ACTIVITIES 21

7–Nutrition 22
ACTIVITIES 26

8–Special Diets 29
ACTIVITIES 32

9–Tools and Utensils 33
ACTIVITIES 37

10–Food Preparation Equipment 40
ACTIVITIES 43

11–Cold Storage, Serving, and Cleaning Equipment 45
ACTIVITIES 48

Page

12–Food and Supplies 49
ACTIVITIES 52

13–Food Preparation Techniques 54
ACTIVITIES 60

14–Beverages 63
ACTIVITIES 66

15–Cold Sandwiches 68
ACTIVITIES 71

16–Salads 72
ACTIVITIES 76

17–Appetizers 77
ACTIVITIES 80

18–Soups and Sauces 82
ACTIVITIES 85

19–Meat, Poultry, and Fish 86
ACTIVITIES 90

20–Eggs and Cheese 91
ACTIVITIES 95

21–Cereal and Pasta 97
ACTIVITIES 100

22–Vegetables and Fruits 101
ACTIVITIES 105

23–Breads 107
ACTIVITIES 111

24–Desserts and Cookies 113
ACTIVITIES 117

25–Cakes and Icings 118
ACTIVITIES 122

Page

26–Pastry and Pies 124
ACTIVITIES 127

27–Basic Service Skills 128
ACTIVITIES 132

28–Sidework 136
ACTIVITIES 139

29–Styles of Service 141
ACTIVITIES 144

30–Table Service 146
ACTIVITIES 150

31–Counter and Self-Service 151
ACTIVITIES 154

32–Other Types of Food Service 158
ACTIVITIES 161

33–Money Handling 162
ACTIVITIES 165

34–Management Responsibilities 167
ACTIVITIES 169

35–Cost Control 171
ACTIVITIES 173

36–Buyers, Receivers, and The Storeroom 174
ACTIVITIES 176

37–Finances and Recordkeeping 177
ACTIVITIES 179

38–Personnel and Production Services 180
ACTIVITIES 182

39–Merchandising and Public Relations 183
ACTIVITIES 185

Preface

Food service is big business. The food service industry is the nation's largest retail employer. It is also one of the fastest growing industries in the United States. The National Institute of the Food Service Industry estimates that 250,000 employees are needed each year for new positions. Positions are available in restaurants, schools, institutions, and hospitals.

Career opportunities in food service are unlimited, ranging from beginning jobs open to the inexperienced, to the highest managerial positions requiring extensive experience and/or training.

Occupational Education Series

Food Production, Management, and Services is part of an occupational education series which focuses on a broad range of employment opportunities. Each title in the series addresses one career cluster. The instructional materials designed for each cluster include four components:

•Reference Book. Provides information needed by employees in the occupational area. Each chapter begins with Competencies to Develop and Objectives to Achieve. Within the text, italicized, bold-faced vocabulary terms are followed by a definition or explanation. Illustrations of equipment and procedures aid student learning. The content of each chapter is summarized in Points to Remember. The vocabulary terms are repeated in a list of Words to Know. Technical terms and concepts may also be located quickly by using the index. Questions for Review are provided for the student as a self-test.

•Curriculum Guide. Provides a variety of teacher information. Teaching strategies, teaching aids, laboratory management guides, and test questions, coordinated with the chapters in the reference book.

•Student Activity Book. Provides a variety of pencil-and-paper activities. Activities are correlated with chapters in the reference book.

•Student Aids. Provides information at third to fourth grade reading level and simplified pencil-and-paper activities.

This series of coordinated components is designed to meet a variety of instructional needs. The needs of both cooperative education and laboratory education students can be met. Both regular and special needs students can be accommodated.

Student Aids

The *Food Production, Management, and Services* student aid book is designed to supplement *Food Production, Management, and Services* reference book. Major

876

points are covered, however, this student aid book is designed only as a supplement, not a replacement for *Food Production, Management, and Services* reference book. With this in mind, a list of Points To Remember at the end of each chapter further highlights important information from the reference book. Words To Know and many of the Activities in the student aid book rely on information from both the reference book and the student aid book.

The book is divided into 39 chapters grouped into seven parts, each covering a major idea in food production, management, and service. Each part of the book is based on specific concepts of food production, management, and service.

Part 1 introduces food service career opportunities. It provides an overview of the food service industry and an introduction to food service careers. It identifies jobs available for beginners as well as opportunities for advancement.

Part 2 covers basic concepts in food service. It Introduces safety, emergency procedures, sanitation, and nutrition.

Part 3 provides information about the equipment, food, and supplies used in food service operations. The chapters in this part include many illustrations.

Part 4 on food production provides information on preparing a variety of types of foods.

Part 5 is on customer service. It introduces various styles of service including counter and takeout service, tray line service seated service, and special types of food service. The final chapter in this part is devoted to money handling.

No book can provide all the information needed for a career in food production, management, and service. Students should be encouraged to study various topics more intensively, to use references suggested in the teachers guide, and to apply the information in either laboratory or on-the-job training. Hands-on experience either on the job or in a food service laboratory is essential to understanding the concepts of food production, management, and service.

877

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Members of the Advisory Committee provided input regarding content and reviewed drafts of the materials. The advisory committee members include the following:

Don George
Texas Restaurant Association
Austin

Anita Hinojosa
City Home Economics
Supervisor
Corpus Christi

Sandra Honeycutt
Home Economics Teacher
Evans Junior High
Lubbock

Barbara Ware
Specialist, Occupational Education
Dallas ISD

David K. Hayes
Director and Associate
Professor, Restaurant
and Institutional
Management
Texas Tech University
Lubbock

Julia Summers
Home Economics Dept.
Tarleton State University
Stephenville

Field reviewers included Vocational Home Economics Education teachers representing schools of varying sizes across the state who reviewed drafts of the materials and provided input regarding content.

Texas reviewers and the schools they represent included the following:

Imogene Behannon
Henderson High School

Odell Chism
Skyline Career Center

Geralyn Cray
Jeff Davis High School

Barbara Friedson
Tom C. Clark High School

Cloteal L. Hall
Huntsville High School

Glenda Harris
Roosevelt High School

Becky Heard
Pecos High School

Terri Jez
Santa Fe High School

Peggy Kelley
Pecos High School

Charlotte Lee
Foy Moody High School

Jacqueline Mathews
Centerville High School

Laura Newburn
Bullard High School

Sarita Ochoa
Lamar Junior High

Oralia Perez
Hanna High School

Ann H. Pogue
South Grand Prairie High School

Patsy Pundt
Borger High School

Louise Smith
Cooper High School

Lou Nell Spurrier
McKinney High School

Julie Summers
Tarleton State University

Marsha Walker
University High School

Jeanette Young
Levelland Junior High

Texas Education Agency Home Economics Personnel who reviewed the materials included the following:

Virginia Chancellor

Cindy Gruner

Judith Hetherly

Gay Nell McGinnis

Sharon Reddell

Susan Owens produced the artwork.
David Harmon designed the cover.
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Chapter 1
The Food Service Industry

COMPETENCY TO DEVELOP

- Identify skills needed to be a good food service employee.

GOALS TO REACH

- Describe the food service industry.
- Describe the types of food service businesses.
- Point out good and bad things about food service work.

A food service business serves food. There are many jobs in food service. Families are eating more meals away from home. This makes more food service jobs.

Food service workers make food for other people to eat. The food is served in many kinds of businesses. There are businesses that serve people sitting at tables or serve people while they are standing in a line. These are called cafeterias (and are found in most schools). Another place where people may get food is at a fast-food restaurant. Fast-food places serve prepared (fixed earlier) food quickly. The food can be eaten at the restaurant or taken home.

Some food service businesses have one owner. Others have two or more owners. Still others, called corporations, have many people (stockholders) who own the business.

There are good things and bad things about working for a food service business.

Good Things

1. There are many different jobs.
2. Sometimes there are benefits like vacations and insurance.
3. Workers are sometimes given meals and uniforms.

4. Work times are open to change.
5. Workers are always needed.
6. It can be a nice place to work.

Bad Things

1. Workers may be needed at night or on weekends.
2. The work is often done under pressure.
3. The work can make you tired.
4. When beginning, the pay may be low.

Points To Remember

- Food service jobs are growing in number.
- People are eating away from home more.
- There are many types of food service businesses.
- There are good things and bad things about working in food service.

Words To Know

benefits
business
cafeteria
corporation
fast-food
food service
insurance
owner
paycheck
vacation

ACTIVITY 1-1 **DIRECTIONS:** Use the words below to fill in the blanks.

cafeteria meals sitting fast-food owner

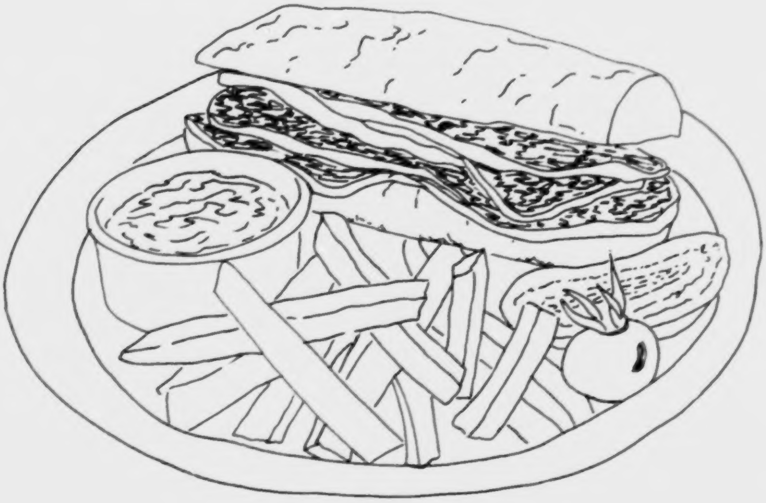
1. Some food service businesses serve food to people _______________ at tables.

2. A place where people stand in a line to get their food is called a _______________.

3. A food service business where one can get food quickly is called a _______________ business.

4. Families are eating more _______________ away from home.

5. Some food service businesses have one _______________.



Chapter 2
Food Service Careers

COMPETENCIES TO DEVELOP

- Identify skills needed to be a good food service employee.
- Describe personal qualities which lead to job success in food production, management, and services.

GOALS TO REACH

- Describe two main areas (back-of-the-house and front-of-the-house) of a food service business.
- Look at food production, management, and service jobs.

Food service jobs are in many kinds of businesses. For example, one could work at a restaurant, fast-food shop, or cafeteria.

Some people work in the back of food service businesses. Others work in the front. The back-of-the-house is the area of the business not usually seen by customers. Jobs in this area are in three main groups:

1. **Support jobs** - dishwasher, pot washer
2. **Production jobs** - meat cutter, cook, baker
3. **Control job** - storeroom worker

Jobs in the front-of-the-house are seen by customers out in the dining area. Jobs in this area are in two main groups:

1. **Service jobs** - waiter/waitress, host/hostess
2. **Manager jobs** - dining room manager, food and beverage manager

A food service business that is large and serves many different food items will usally need more workers.

Some food service jobs require special training. For example, a chef working for a large hotel will need special schooling. Other jobs can be done by workers with less training. These jobs include cleaning tables, washing dishes, or mopping floors.

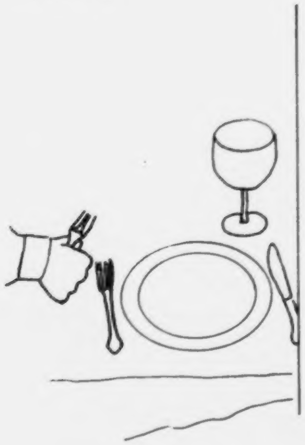
People who work in food service jobs should be friendly and be able to work with other people.

Points To Remember

- Some people work at jobs in the back-of-the-house, while others work at jobs in the front-of-the-house.
- Large food service businesses usually need more workers.
- A food service person should be able to work with others.

Words To Know

back-of-the-house
chef
control jobs
dishwasher
energy
friendly
front-of-the-house
host
hostess
manager jobs
production jobs
restaurant
service jobs
storeroom
support jobs
training
waiter
waitress



ACTIVITY 2-1

DIRECTIONS: Put each job under the word that tells where the job is done.

manager
pot washer
cook
hostess
dishwasher
waitress
takes money
dining room manager
waiter
host
meat cutter

BACK-OF-THE-HOUSE	FRONT-OF-THE-HOUSE
____________	____________
____________	____________
____________	____________
____________	____________
____________	____________

ACTIVITY 2-2

DIRECTIONS: Circle the word to make the sentence true.

1. A dishwasher works in the **(front, back)** of a food service place.
2. A waiter/waitress works in the **(front, back)** of a food service place.
3. When a food service business serves a large number of food items, they usually have **(more, less)** people working there.
4. A person who works in a food service business should be **(mean, friendly)**.
5. A meat cutter works in the **(front, back)** of a food service business.

Chapter 3
Safety

COMPETENCY TO DEVELOP

- Maintain high safety standards in food preparation, service, and cleanup tasks.

GOALS TO REACH

- Review safety rules that managers need to know.
- Review safety rules that food service employees need to know.
- Identify common accidents in food service businesses.
- List ways to keep from having accidents in the food service business.

Safety is important in a food service business. The government has basic rules for safety in food service businesses.

One of the manager's main jobs is to make a business safe. A manager should

1. make a safe place to work
2. develop rules to follow
3. teach the workers about safety
4. make sure the workers follow the rules
5. have emergency equipment available (fire extinguishers, fire blankets, etc.)
6. follow the government safety rules

Workers (employees) should also help to make the workplace safe. Employees should

1. follow the rules
2. tell the manager about dangers (hazards)
3. know where the fire extinguisher is and how to use it
4. know what to do in case of an emergency

A danger or hazard is something that can cause harm. Safety rules try to keep the workplace safe. When safety rules are not followed, accidents happen and people can get hurt. If something is unsafe, it should be changed or fixed.

The most common food service accidents are falls, cuts, burns, shock, explosions, strains, and bruises. Food service workers should follow all of the safety rules to keep accidents from happening.

Points To Remember

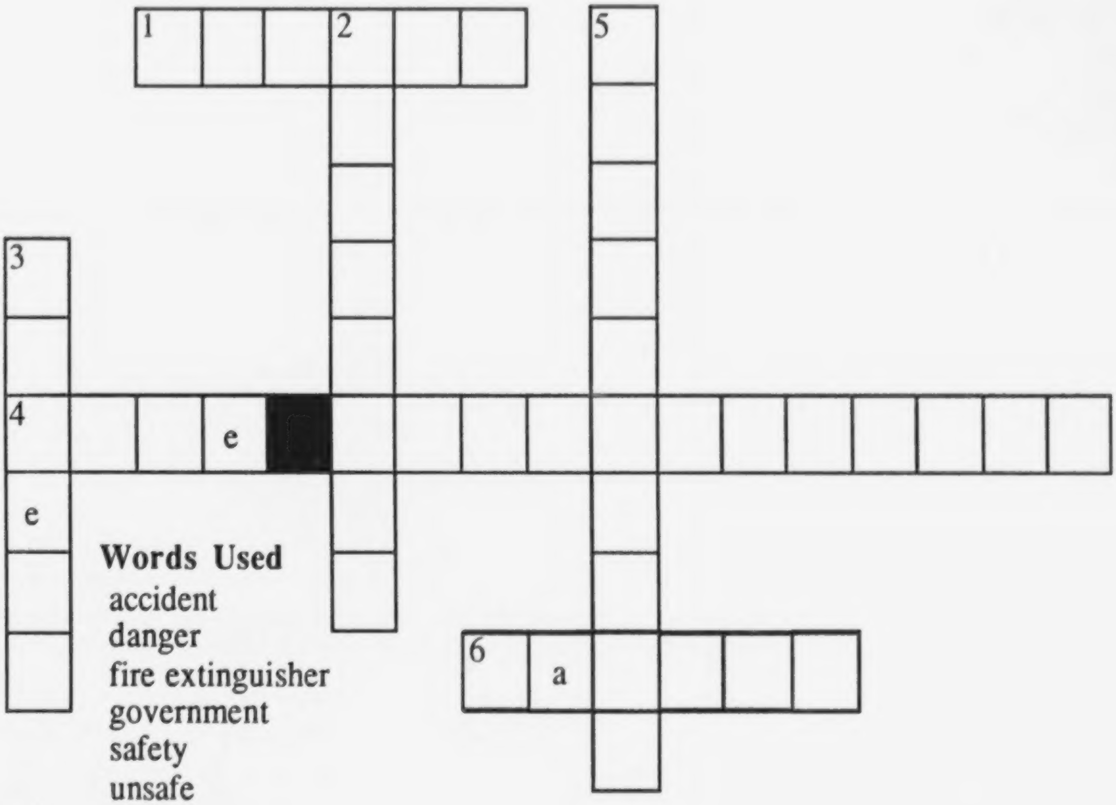
- The government has rules for safety in food service businesses.
- The manager must make a safe place to work, teach workers about safety, have safety rules to follow, make workers follow rules, and have a fire extinguisher.
- Workers should follow the rules, tell the manager of dangers, know what to do in case of danger, and know where the fire extinguisher is and how to use it.
- The most common food service accidents are falls, cuts, burns, shocks, explosions, strains, and bruises.
- Following safety rules can stop accidents.

Words To Know

accident
danger
emergency equipment
employee
fire extinguisher
government
hazard
safety
unsafe

ACTIVITY 3-1

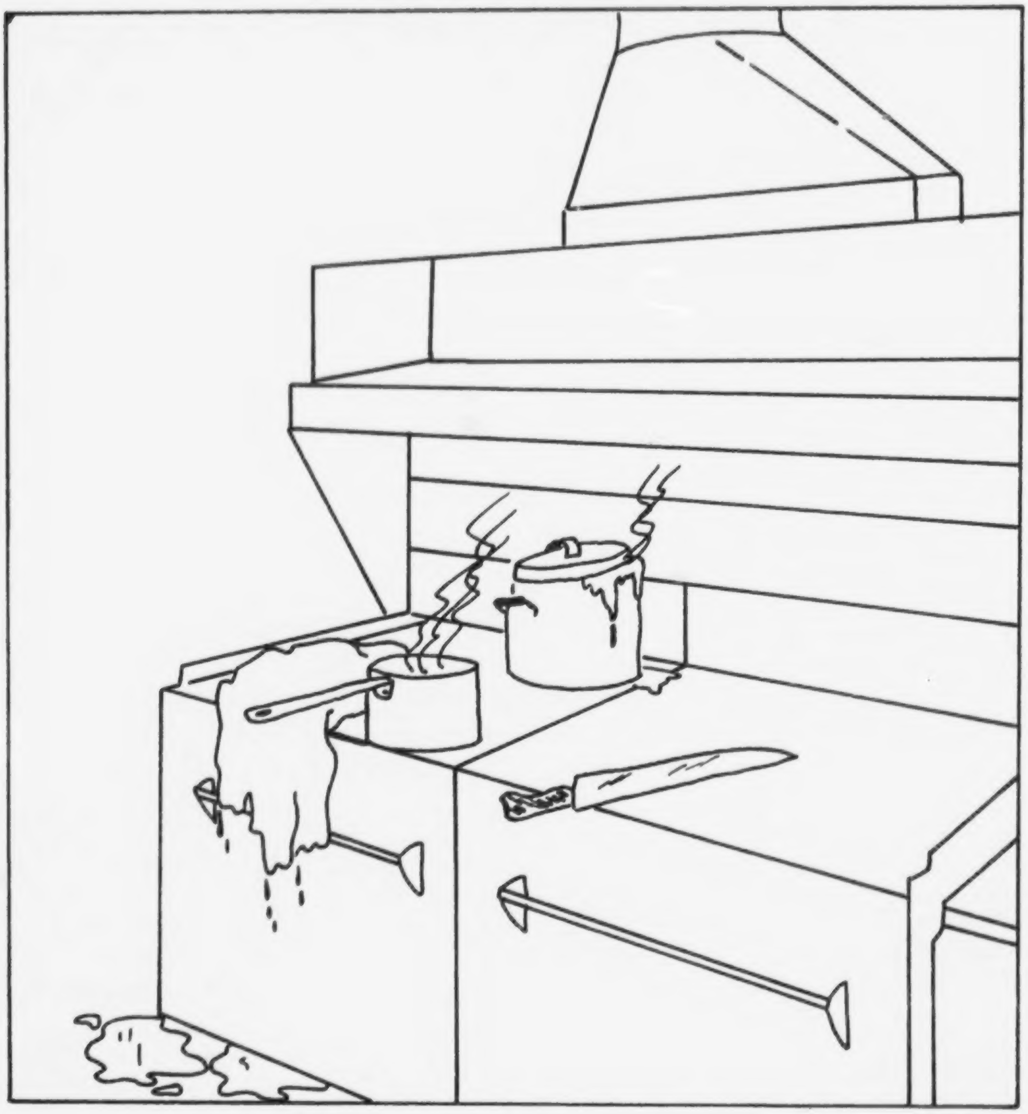
DIRECTIONS: Use the clues to fill in the words in the crossword puzzle. Some letters are written in to help you.



Words Used
accident
danger
fire extinguisher
government
safety
unsafe

ACROSS	**DOWN**
1-something that is not safe	2-something that is not planned
4-used to put out fires (two words)	3-to protect against accidents
6-when someone is in trouble	5-group of people who make rules

ACTIVITY 3-2 **DIRECTIONS:** Color the safety problems in the picture below.



1. Color something that might cause a fire in the picture **red.**

2. Color something that might cause a cut **blue.**

3. Color something that might cause a fall **yellow**.

Chapter 4
Emergency Procedures

COMPETENCIES TO DEVELOP

- Follow correct procedures in emergency situations.
- Complete accident reports and records.

GOALS TO REACH

- Describe what to do in case of fire.
- Explain how to use a fire extinguisher.
- List fires by their types.
- Review what to do in case of bad (tornado, hurricane, etc.) weather.
- List what to do if someone gets sick or hurt.

Food service workers should know what to do in case of an emergency. An emergency is when something serious has happened or may happen. An emergency needs quick action. That is, something must be done: for example, a fire must be put out; shelter must be taken during a tornado. Fires, bad weather, and medical emergencies are three types of emergencies.

Bad fires may happen anywhere in the food service establishment but most often they occur in food service kitchens. Every worker should know what to do in case of a fire. Employees should know how to

1. get help from the manager
2. call the fire department and
3. help people safely leave the food service business.

When calling the fire department, give them

- your name
- the name of the business
- the address of the business
- the location of the fire
- the size of the fire
- the type of the fire

A fire extinguisher can be used to put out fires. To use a fire extinguisher, think of the word **PASS:**

1. **P**ull the pin.
2. **A**im the extinguisher at the base of the fire.
3. **S**queeze or press the handle.
4. **S**weep the extinguisher or move it from side to side until the fire is out.

There are three types of fires that may occur in a food service business:

Class A - wood, paper, or trash fires
Class B - gas, grease, or other liquid fires
Class C - electrical fires

Never use water on a grease or electrical fire.

The weather can also cause emergency situations. Television and radio will usually warn if there is bad weather coming. All food service workers should know the safest place for shelter in the food service business.

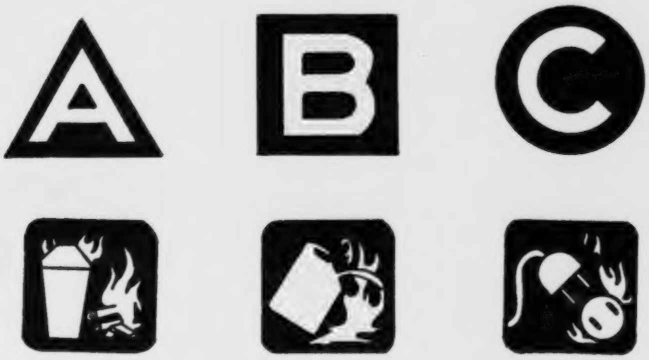
If someone is hurt at the food service business, get help. The person may need first aid care. Any accident should be reported to the manager.

Points To Remember

- Food service workers should know what to do in case of an emergency.
- Get help if there is a fire.
- There are 3 types of fires: Class A, Class B, and Class C.
- Television and radio usually warn if bad weather is coming.
- All accidents should be reported to the manager.

Words To Know

base
Class A fire
Class B fire
Class C fire
electrical
emergency
first aid
garbage
grease
shelter
trash
weather



ACTIVITY 4-1

DIRECTIONS: Fill in the chart below by listing your local fire department's phone number and the information to give when reporting a fire.

IN CASE OF FIRE

Dial ________________________________

and report the following:

____

____

____

____

ACTIVITY 4-2

DIRECTIONS: In the blanks provided write the letter that best completes the sentence. Letters are provided below:

A **B** **C**

1. A fire consisting of wood, paper, or trash would be classified as a class ________ fire.

2. A fire consisting of live electrical equipment would be classified as a class ________ fire.

3. A fire consisting of gas, grease, or other liquids would be classified as a class ___________ fire.

Chapter 5
Personnel, Equipment, and Facility Sanitation

COMPETENCIES TO DEVELOP

- Follow federal, state, and local sanitation codes for food service businesses.
- Maintain acceptable standards in personal grooming and cleanliness.
- Perform sanitation duties according to the cleaning schedule provided.
- Use sanitary procedures when washing, sanitizing, and drying pots, pans, and other utensils by hand.
- Inspect, sort, and store clean glassware, tableware, and flatware from the dishwashing machine.
- Report signs of pests in the food service businesses.

GOALS TO REACH

- Review rules about keeping the food service business clean.
- Show how food service employees need to keep clean.
- List ways to keep bugs and mice out of food service businesses.

Sanitation is the practice of keeping things clean to help people stay healthy. Clean means that no dirt can be seen. Sanitary means that there are no germs or bugs.

The government has laws about keeping things sanitary. These laws help protect consumers and foods from germs.

Many germs come from people. This is one reason why food service workers should wash their hands frequently. Hands can spread germs.

Hands should be washed

- before starting work
- before touching food
- after going to the restroom
- after coughing, sneezing, or blowing the nose
- after touching your hair or face
- after smoking
- after handling money

Steps in washing hands include the following:

1. Use the correct sink.
2. Turn on the cold water. Add hot water until it is as hot as you can stand.
3. Wet your hands and wrists under running water.
4. Use soap and work it into a lather.
5. Rub your hands together. Make sure to scrub your knuckles and nails.
6. Rinse all the soap off your hands and wrists under running water.
7. Turn off the water
8. Dry your hands and wrists thoroughly with paper towels.
9. Throw paper towels in the trash can.

Food service workers should always wear clean undergarments and uniforms. Fingernails should be kept clean and short. Do not use fingernail polish. Do not wear rings (except a wedding ring) or jewelry when working.

Dishwashing is an important job. Dishes, glasses, and flatware must be clean and sanitary. Dishes can be washed by hand or a dishwashing machine can be used. Germs on the dishes must be killed. This is done by rinsing the dishes in very hot water, or by using a chemical sanitizer (a liquid that kills germs).

The dishwashing machines used in food service kitchens should be clean and sanitary. Also table tops and countertops must be clean and sanitary. Table tops are cleaned using the following steps:

1. Remove the dishes, glasses, and flatware from the table.
2. Wipe the table using a clean cloth.
3. Clean table tops with a chemical sanitizer.
4. With a separate, clean cloth wipe out the ashtray.
5. With another clean cloth wipe off the salt and pepper shakers.

Good sanitation helps to stop pests. Common pests are flies, ants, and cockroaches. Mice and rats are also pests, but more often they are called rodents. Many pests carry germs which cause illnesses. To help prevent pests, put away all food and cleanup spilled foods. Any signs of pests should be reported to the manager.

Points To Remember

- Sanitation is the practice of keeping things clean to help people stay healthy.
- The government has laws about keeping food service businesses sanitary.
- Food service workers should always keep themselves and their clothes clean.
- Food service businesses should always be kept clean.
- Keeping things clean and food put away can stop pests.

Words To Know

bugs
chemical sanitizers
clean
consumer
dishwashing machine
germs
pests
rodents
sanitary
sanitation
sanitized
sanitizer

ACTIVITY 5-1

DIRECTIONS: Use the numbers 1 to 9 to list the steps for washing hands in correct order. Number 1, the first step, and number 9, the last step, are filled in for you.

_____ Use soap and work it into a lather.

__9__ Throw paper towels into the trash can.

__1__ Use the correct sink.

_____ Wet your hands and wrists under running water.

_____ Rinse all soap off your hands and wrists.

_____ Turn off the water.

_____ Turn on the cold water. Add hot water.

_____ Rub your hands together with soap.

_____ Dry your hands and wrists thoroughly with paper towels.

ACTIVITY 5-2

DIRECTIONS: Circle **T** if the statement is true. Circle **F** if the statement is false.

T **F** 1. The government has rules about sanitation.

T **F** 2. Most germs come from the air.

T **F** 3. Food service workers should not wear fingernail polish.

T **F** 4. People can get germs from pests.

T **F** 5. If something is sanitary, it has a lot of germs and pests on it.

Chapter 6
Food Sanitation

COMPETENCY TO DEVELOP

- Use sanitary food handling, preparation, and storage techniques.

GOALS TO REACH

- Describe biological (germs), chemical (soaps and bleaches), and physical (heat and cold) dangers to food
- Describe things in food that can make us sick.
- List ways to keep food clean and free from hazards when it is held or stored.
- Know what is meant by the time and temperature principle.
- Describe what to do with leftover food.

Foods become dangerous to people when the foods have bad germs in them. A food-borne illness is a sickness that people get from food containing a bad germ.

Three ways food-borne illnesses start are

1. Bacteria gets in food
2. Chemicals get in food
3. Improper care (heat or cold) of food

Bacteria are living things. They need food, warmth, and moisture to live and grow. Bacteria can enter food that is not properly handled transported or stored. When food is placed in the refrigerator, the cold slows or stops bacteria growth. When food is cooked at the right temperature for the right amount of time the bacteria is killed.

Chemical sanitizers, pest sprays and poisons, and cleaning products can be dangerous. They should be (1) properly labeled and they should be (2) stored separately from food products and equipment used in preparing food. Chemicals can also get on fruits and vegetables from the bug spray (pesticide [pest-a-side]) used by farmers. Before using any fruits or vegetables, wash them carefully.

When food is cared for wrong, it can make people ill. Food service workers should wash all raw fruits and vegetables. They should also wash their hands and cover their hair.

The time and temperature principle means keep hot foods hot and cold foods cold. Cold foods should be kept below 45° F; hot foods should be kept above 140° F. This prevents bacteria from growing.

Leftover foods should be tightly covered to prevent bacteria growth. Label the container with the name of the food and the date. To store leftovers put them in the refrigerator or freezer. The temperature in a refrigerator should be 45° F or below. A freezer should be between -10° to 0° F.

Points To Remember

- A food-borne illness can make people sick.
- Bacteria can be bad for food.
- Chemicals should be properly labeled and stored separately from food products and equipment used in food preparation.
- Wash all raw fruits and vegetables carefully.
- Leftovers should be stored in the refrigerator or freezer.

Words To Know

bacteria
biological
chemical
food-borne illness
freezer
germs
labeled
leftovers
poisonous
refrigerator
storage
time and temperature principle
transporting

ACTIVITY 6-1 **DIRECTIONS:** Write a definition for each word below using a dictionary or textbook

bacteria -

food-borne illness -

poisonous -

chemical -

time and temperature principle -

ACTIVITY 6-2 **DIRECTIONS:** Read each statement. Circle the best answer for each statement.

1. A sickness people get from food is called
   a. bacteria.
   b. leftover.
   c. food-borne illness.

2. To grow, bacteria need
   a. warm, moist places.
   b. cold places.
   c. boiling water.

3. To protect food, chemicals should
   a. be stored separately.
   b. never used in a food service business.
   c. used only with water added.

4. Leftovers should always be
   a. left out where they are served.
   b. covered.
   c. washed thoroughly.

5. Hot foods should be
   a. kept hot, above 140° F.
   b. left out to cool to room temperature.
   c. thrown out after 29 minutes.

Chapter 7
Nutrition

COMPETENCIES TO DEVELOP

- Use nutritional information in meeting dietary needs of persons of various ages.
- Use food preparation techniques which save nutrients.
- Describe factors which affect eating habits.

GOALS TO REACH

- Describe the uses of food
- Know where vitamins are found.
- Describe cooking methods that save nutrients.
- Outline the Daily Food Group.
- Know what makes people eat certain things.

Food is made up of small units. Some of these units are called nutrients. Nutrients the body needs are protein, carbohydrates, fats, vitamins, and minerals. Water is important too.

There are three main purposes of nutrients:

1. nutrients provide energy for the body
2. nutrients help in the growth and repair of the body
3. and, nutrients help control the processes of the body

Protein is important to the body. It helps with the growth and repair of the body. Protein helps to make new cells. Protein is found in meat, eggs, fish, poultry, nuts, cheese, and milk. Protein foods should be cooked at low temperatures.

Carbohydrates are the body's main source of energy. The 3 main types of carbohydrates are sugar, starch, and fiber. Sugar can be found in candy, fruits, and foods to which sugar has been added. Starch is found in bread, cereal, potatoes, and rice. Fiber helps the body remove wastes. Cereals, raw vegetables, and fruits contain fiber. In cooking, sugars dissovle in water and starches mix with water. The water used to cook fruits or vegetables can be saved for soups, sauces, or gravies. This will prevent losing the carbohydrates dissolved in cooking.

Fat is a compact source of energy. Butter, cooking oils, margarine, meats, and eggs contain fat. Cooking has little effect on the value of fats.

Vitamins are important to good health. Vitamins work with each other and with the other nutrients. Vitamins help to fight specific diseases. Some of the vitamins are A, B, C, and D. They are found in many different foods, especially vegetables and fruits. Vitamins A and D are fat-soluble vitamins. They are not easily lost in cooking. They do not dissolve in water and are not destroyed by heat. Vitamins C and B are water-soluble vitamins. If they are in water for a long time, the vitamins begin to dissolve. To prevent this, cook the vegetables and fruits that contain these vitamins in large pieces in as little water as possible.

Minerals help to control the body processes. They also provide the things needed for making new cells. Calcium and phosphorus are minerals needed for strong bones and teeth. These are found in milk and milk products. Iron is another mineral. It is important for healthy blood. The best food sources of iron are liver, meats, egg yolks, and green leafy vegetables. Minerals dissolve in water. They are easily lost in cooking. Foods should be cooked in as little water as possible to keep the minerals.

Foods can be divided into 5 groups. The groups provide the nutrients and calories the body needs. Calories are the measure of energy in food. To get the nutrients that the body needs one should eat the number of servings suggested from each food group.

DAILY FOOD GUIDE

Food group	Serving Needed Daily
vegetables and fruits	4 servings
bread and cereal	4 servings
milk and cheese	2-4 servings
meats, poultry, fish, and beans	2 servings
fats, sweets, and alcohol	None needed

Several things affect what people eat. Among these are cultural background, personal likes, time of year or season, age, health, and activities.

Points To Remember

- Food gives the body energy.
- Nutrients needed by the body are protein, carbohydrates, fats, vitamins, and minerals.
- Water is important to the body.
- Nutrients are needed by the body for energy, growth, repair, and they help control the body processes.
- Proteins help the body to grow and repair itself.
- Carbohydrates and fats are the body's main source of energy.
- Vitamins help the body use other nutrients.
- Minerals help to control the body processes.
- The Daily Food Guide is made up of 5 groups: vegetables and fruits; bread and cereal; milk and cheese; meats, poultry, fish, and beans; and fats, sweets, and alcohol.
- Things that affect the foods people eat are cultural background, personal likes, time of year or season, age, health, and activities.

Words To Know

- calcium
- calories
- carbohydrate
- cultural
- Daily Food Guide
- disease
- dissolve
- energy
- fat
- fat-soluble
- fiber
- mineral
- nutrients
- phosphorus
- protein
- season
- starch
- sugar
- vitamin
- water
- water-soluble

ice cream
milk

ACTIVITY 7-1

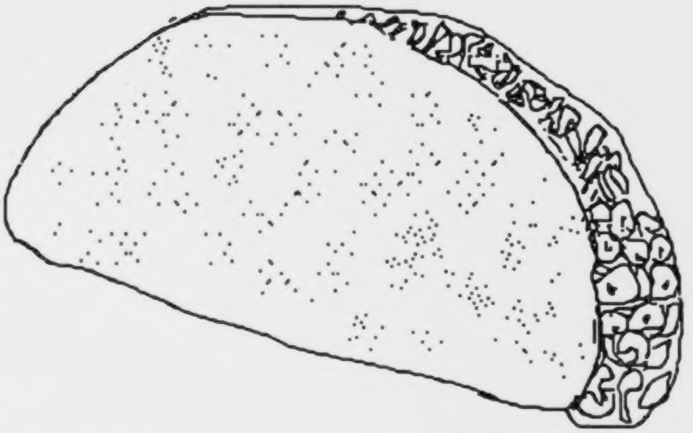
DIRECTIONS: Fill in the blanks with the word or words that best complete the sentence.

blood
nutrients
cells
repair
energy
starch
liver
vitamins
minerals
waste

1. Proteins, carbohydrates, fats, vitamins, minerals, and water are called ______________.
2. Protein helps with growth and ______________.
3. The three main types of carbohydrates are sugar, ______________ , and fiber.
4. Carbohydrates and fats are the source of ______________.
5. Calcium and iron are ______________.
6. A, B, C, and D are ______________.
7. Iron is important to the ______________.
8. Fiber helps to remove ______________.
9. Proteins help make new ______________.
10. A good source of iron is ______________.

ACTIVITY 7-2

DIRECTIONS: Name the food groups contained in a **taco.** List the specific food which belongs in each group. Then tell why the food group is needed.



FOOD GROUPS	**SPECIFIC FOOD**
1.	
2.	
3.	
4.	

Why is each food group needed?

____

____

What other foods can you think of that contain several of the food groups all in one dish or entree? List these here.

____

____

ACTIVITY 7-3

DIRECTIONS: Match each food with the correct food group. Place the letter of the food group in the blank to the left of each food. The letters may be used more than once.

Food

_______ 1. cottage cheese
_______ 2. lentils
_______ 3. liver
_______ 4. jam
_______ 5. broccoli
_______ 6. rolled oats
_______ 7. chicken
_______ 8. ice cream
_______ 9. soft drinks
_______10. noodles
_______11. cabbage
_______12. flour
_______13. candy
_______14. ham
_______15. yogurt
_______16. orange juice
_______17. eggs
_______18. spinach
_______19. potatoes
_______20. bananas

Food groups

A. Milk and Cheese
B. Meats, Poultry, Fish, and Beans
C. Vegetables and Fruits
D. Bread and Cereal
E. Fats, Sweets, and Alcohol

Chapter 8
Special Diets

COMPETENCIES TO DEVELOP

- Define and use correct diet terms.
- Identify menus for general and modified diets.
- Adapt menus for modified diets.
- Follow diet instructions in preparing general and modified diets and diet supplements, and in assembling trays.
- Report patient's response to food to the supervisor.

GOALS TO REACH

- Explain the use of cycle menus.
- List special items to think about when planning meals for children.
- Describe what needs to be included for meals in a school lunchroom.
- List special items to think about when planning meals for older people and for the ill.
- Describe the types of meals given to people with health problems.

A food service worker may work in many different types of businesses. Each business has its own type of menu and diet. Beginning food service work will not involve planning the menus, but workers should understand the menus.

Cycle menus are a set of carefully planned menus. They may cover a 3 to 6 week period. This type of menu saves time in planning.

Most states have food service and nutritional guidelines for child care centers. These guidelines tell what kinds of foods to serve and the amounts needed. The food likes and dislikes of young children should be considered.

In school cafeterias, the food served should look good and be nutritious. The federal government has rules to help plan the lunch and breakfast menus. The meals should be inexpensive.

Hospitals and nursing homes serve meals to people. Some people are able to eat in the dining room. These people may be on a regular diet. The people may get to choose what they want to eat.

Some people need special diets because of health problems. Some of these diets are liquid, soft, low-calorie, low-salt, or low-fat.

Liquid diets include gelatin, broths, tea, juices, and sodas. This is for a person who is having a problem taking food or has been vomiting.

Soft diets follow the liquid diet. They may be given to a person who has had surgery or digestive problems. They include soft-cooked eggs, chopped meats, potatoes, toasted white bread, and crackers.

A low-calorie diet may be used to lose weight. It would limit the amount of food eaten. A low-fat diet may be for people with heart problems. The food eaten is low in fat.

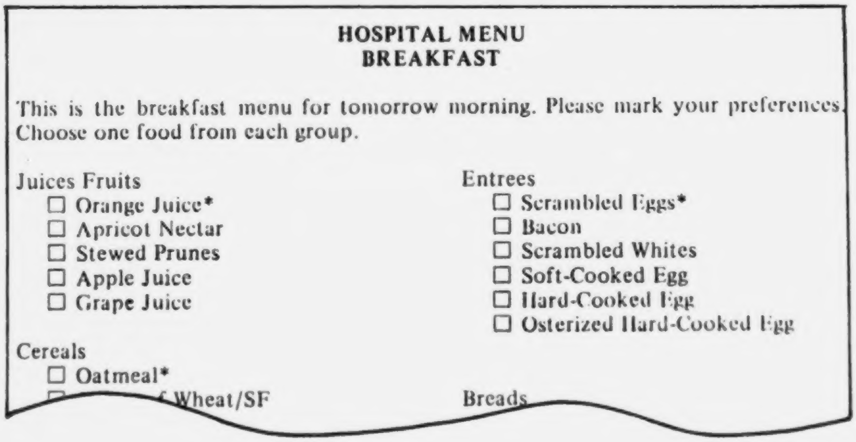
Some people who eat too much salt retain water and swell. When this happens salt is limited in the diet. Some foods that should not be eaten are bacon, ham, potato chips, and saltwater fish.

Points To Remember

- Cycle menus are a set of carefully planned menus.
- A child's nutritional needs are very important.
- There are state guidelines for the food served in child care centers.
- School cafeterias should have attractive, nutritious, low-priced meals.

Words To Know

cycle menus
diet
guideline
hospital
low-calorie
low-fat
low-salt
menu
nursing home
nutritional
nutritious
regular diet



HOSPITAL MENU
BREAKFAST

This is the breakfast menu for tomorrow morning. Please mark your preferences. Choose one food from each group.

Juices Fruits
☐ Orange Juice*
☐ Apricot Nectar
☐ Stewed Prunes
☐ Apple Juice
☐ Grape Juice

Cereals
☐ Oatmeal*
☐ f Wheat/SF

Entrees
☐ Scrambled Eggs*
☐ Bacon
☐ Scrambled Whites
☐ Soft-Cooked Egg
☐ Hard-Cooked Egg
☐ Osterized Hard-Cooked Egg

Breads

ACTIVITY 8-1

DIRECTIONS: Read the statement. Select the one best answer for each statement. Color in the triangle to the left of the correct answer.

1. A cycle menu covers
   - Δ a year.
   - Δ one week.
   - Δ six months.
   - Δ three to six weeks.

2. A liquid diet would include
   - Δ no salt.
   - Δ gelatin.
   - Δ potato chips.
   - Δ chopped meats.

3. A low-salt diet should limit
   - Δ liquids.
   - Δ soft meats.
   - Δ bacon.
   - Δ calories.

4. Soft diets are given to people with
   - Δ weight problems.
   - Δ problems with swelling.
   - Δ heart problems.
   - Δ digestive problems.

5. Which of the following should **NOT** be considered when planning meals for a child care center?
   - Δ what is advertised on television.
   - Δ likes and dislikes of children.
   - Δ nutrition.
   - Δ amount of food needed.

Chapter 9
Tools and Utensils

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.

GOALS TO REACH

- Know what tools and utensils are.
- Select the right tools for making food.
- Select the right utensils for making food.

Many kinds of small equipment are used in food service businesses. Some are called tools. Tools are hand-held equipment like knives, spoons, or turners. Others are called utensils. Utensils hold food. Many of the tools and utensils used by businesses are like those used at home.

TOOLS

Measuring

Measuring cups - used to measure liquid or dry foods
Measuring spoons - used to measure small amounts of liquid or dry foods
Thermometers - used to measure the temperature of food or air

Cutting

Boning knife - cutting meat from the bone
Bread knife - cutting bread
French knife - cutting raw vegetables, slicing hot or warm meats
Paring knife- taking skins/peels off vegetables and fruits
Slicer - slicing tomatoes, slicing roasts or hams, cutting cakes
Grater - to grate, shred, slice foods like carrots or cheese
Peeler - taking skins/peels off of fruits and vegetables with a peeler

Food Handling

Spoons - used to stir or mix food
Slotted spoon - used to lift food out of liquid
Ladles - used to move food from one place to another like soups
Scoop - metal half-ball shaped cup, used to portion food, like ice cream
Spatulas -use to level ingredients when measuring, or for spreading frostings or fillings
Turners - used to turn meats, pancakes, or eggs
Tongs - used to turn and serve food

Beating and Whipping

Whisk - used to whip or blend

Brushing

Pastry brush - used to spread melted butter
Vegetable brush - used to clean vegetables and fruits

Baking

Sifter - used to remove lumps from flour
Pastry blender - used to mix shortening and flour together
Rolling pin - used to roll out pastry, rolls, and cookies

UTENSILS

Mixing and Molding

Bowls - container used to mix food
Molds - containers used to make shaped gelatin and desserts

Straining

Strainer - used to separate liquids and solids

Colander - metal bowl with holes; used to drain the water from food such as pasta or to wash fruits and vegetables

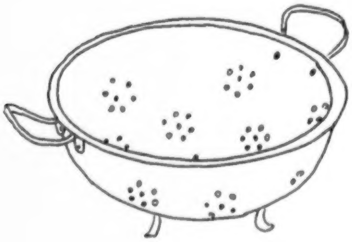
Cooking

Frying pans/Skillets - used for cooking foods in small amounts of fat
Saucepans - used to cook small amounts of sauces or vegetables

Baking and Roasting

Baking pan/Baking sheets - used for meats and cakes
Roasting pans - used for meats, poultry, fish
Cake pans - can be round or square; used to bake cakes
Loaf pans - used for baking breads
Muffin pans - used for rolls, corn muffins, and breakfast muffins

Small equipment is needed to make and serve food and drinks.



Points To Remember

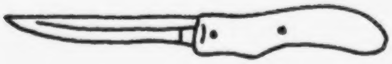
- Tools are hand-held equipment while utensils are for holding foods.
- There are tools for measuring, cutting, handling, beating and whipping, brushing, and baking.
- There are utensils for mixing, molding, straining, cooking, baking, and roasting.
- Special equipment is needed to move and serve food.

Words To Know

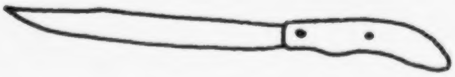
baking pan
baking sheet
cake pan
colander
equipment
fry pan
knife
ladle
loaf pan
measuring
mold
muffin pan
pastry blender
pastry brush
peeler
roasting pan
rolling pin
saucepan
scoop
sifter
skillet
spatula
strainer
tool
turner
utensil
vegetable brush
whisk

ACTIVITY 9-1

DIRECTIONS: Identify the cutting tools in the illustrations on the left. Write the name of the cutting tool in the blank to the right of each number.

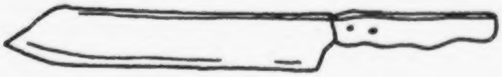


1. ______________________________

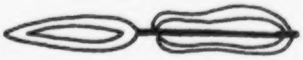


2. ______________________________

3. ______________________________



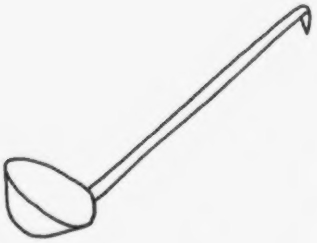
4. ______________________________



5. ______________________________

ACTIVITY 9-2

DIRECTIONS: Identify the hand tools below and give their main uses. Write your answers on the lines below the tool.



1. ______________________

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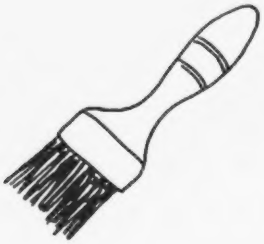

2. ______________________

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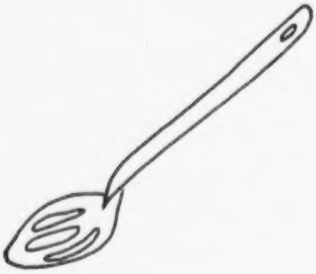

3. ______________________

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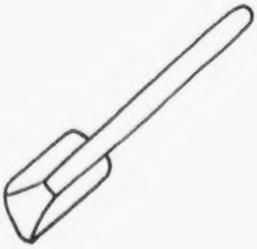

4. ______________________

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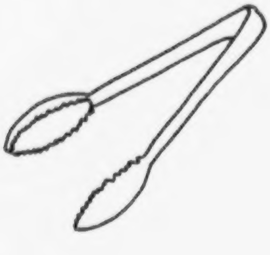

5. ______________________

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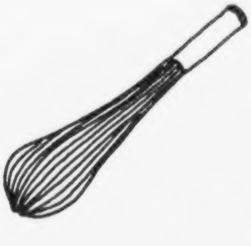


6. ______________________

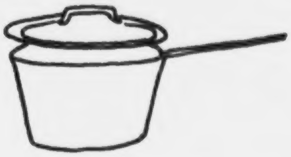
____

ACTIVITY 9-3

DIRECTIONS: In the space provided, write a brief description for the use of each pan illustrated.

Utensil **Used for?**

Saucepan



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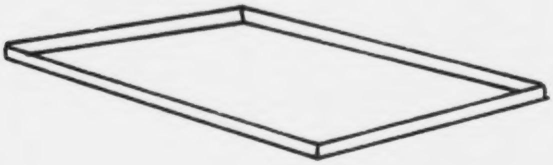
Baking sheet



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____

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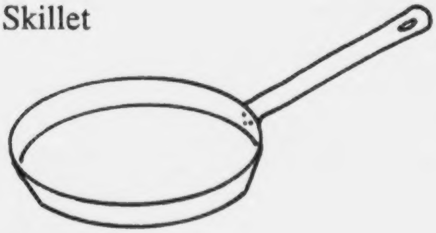
Skillet



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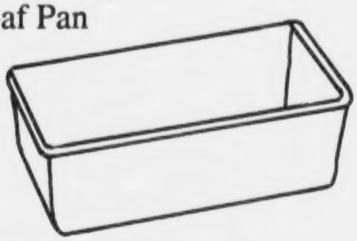
Loaf Pan



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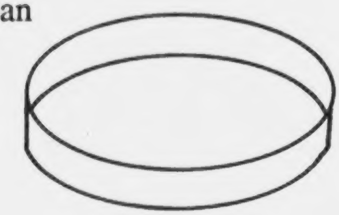
____

____

Cake pan



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Chapter 10
Food Preparation Equipment

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment used in making food

GOALS TO REACH

- Identify equipment used in making food.
- Outline uses of equipment to make food.

Different kinds of equipment are needed to prepare and cook food. Special equipment is used to weigh food, open cans, cut food, mix food, cook food, and to make and serve drinks.

Scales are used to weigh food. Foods are weighed when large amounts of food are made. There are different kinds of scales for different ingredients.

Can openers are used to open cans. There are two main types of can openers. The bench-type manual can opener is run by turning a handle. The electric can opener works by placing the can under the cutting wheel, starting the motor, and turning the can until the lid is cut out.

Some equipment is used to cut food. A food slicer is used to cut meat that does not have bones and to cut cheese. Bread can be cut with a food slicer. Other types of special cutting equipment are food choppers, food processors, and vegetable peelers.

Mixing equipment is used in the making of food. Mixers can be a floor mixer, bench mixer, or a table mixer. The floor model is used to mix a large amount of dough. The bench mixer and the table mixer are used for mixing the ingredients for cakes, batters, doughs, or pastries. There are different beaters that can be used on the mixers.

Blenders are used for high-speed blending. Food processors can be used to mix.

Coffee can be made and served in an electric urn or a coffee brewer. Tea can be made in a tea urn. Instant tea can be made and served from an iced tea dispenser. Ice machines are used in making ice for drinks.

A gas or electric range top is used for surface cooking. You can cook in many different ways on a range top. Range tops are used for cooking sauces and most vegetables.

Most kitchens have a grill. A grill is a flat piece of metal. The heat comes from underneath. Grills are used to cook foods like eggs, bacon, and hamburgers. Deep fat fryers are used for frying foods by placing the food into hot fat. French fried potatoes are cooked by this method.

Some foods are steamed. There are different kinds of steamers that can be used. This helps to save the nutrients. Vegetables are cooked like this.

Baking and roasting are usually done in ovens. Regular ovens are found beneath the range top. Convection ovens are heated by hot air. A fan blows the hot air through the oven. Microwave ovens are used when the food needs to be cooked quickly.

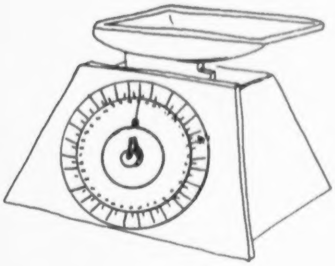
All of the equipment in a food service business should be kept clean. This is to help prevent accidents and to keep germs out of the food.

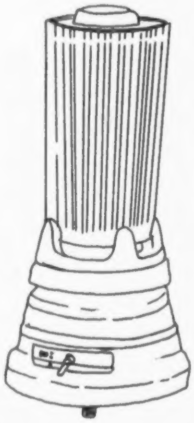
Points To Remember

- There are many kinds of equipment used in a food service business.
- Scales weigh food.
- The two kinds of can openers are bench-type and electric.
- Cutting equipment includes food slicers, food choppers, food processors, and vegetable peelers.
- Mixing equipment includes mixers, food processors, and blenders.
- Coffe makers and tea dispensers are used in making drinks.
- Cooking equipment includes range tops, grills, deep fat fryers, steaming equipment, and ovens.

Words To Know

baking
beater
bench mixer
bench-type manual can opener
blender
coffee brewer
convection oven
deep fat fryer
electric can opener
equipment
floor mixer
food chopper
food processor
food slicer
grill
ice machine
iced tea dispenser
ingredient
microwave oven
range top
scale
steamer
table mixer
vegetable peeler



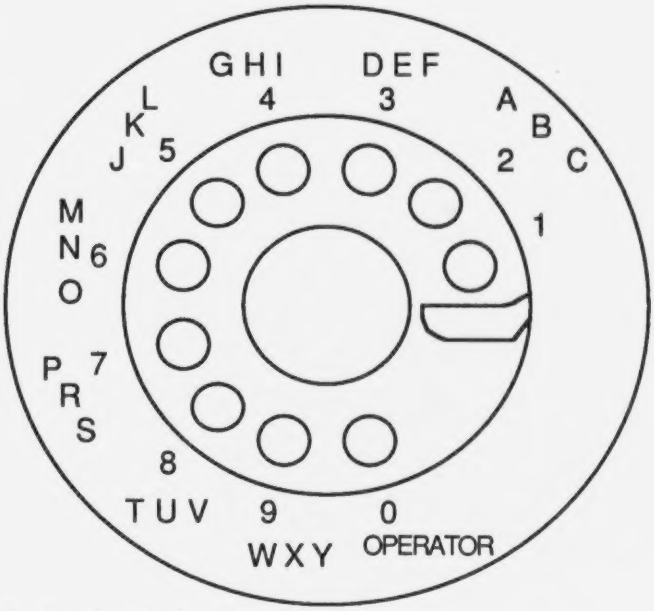


ACTIVITY 10-1

DIRECTIONS: Using the numbers listed below, "dial" and choose the correct letters to spell words associated with cooking equipment. Write the letter in the blanks provided. **Words Used** are provided.

Words Used:

deep fat fryer
grill
microwave
regular oven
steamer


GHI
4
DEF
3
ABC
2
1
JKL
5
MNO
6
PRS
7
8
TUV
9
WXY
0
OPERATOR

1. 7 8 3 2 6 3 7

_ _ _ _ _ _ _

2. 4 7 4 5 5

_ _ _ _ _

3. 3 3 3 7 3 2 8 3 7 9 3 7

_ _ _ _ _ _ _ _ _ _ _ _ _

4. 6 4 2 7 6 9 2 8 3

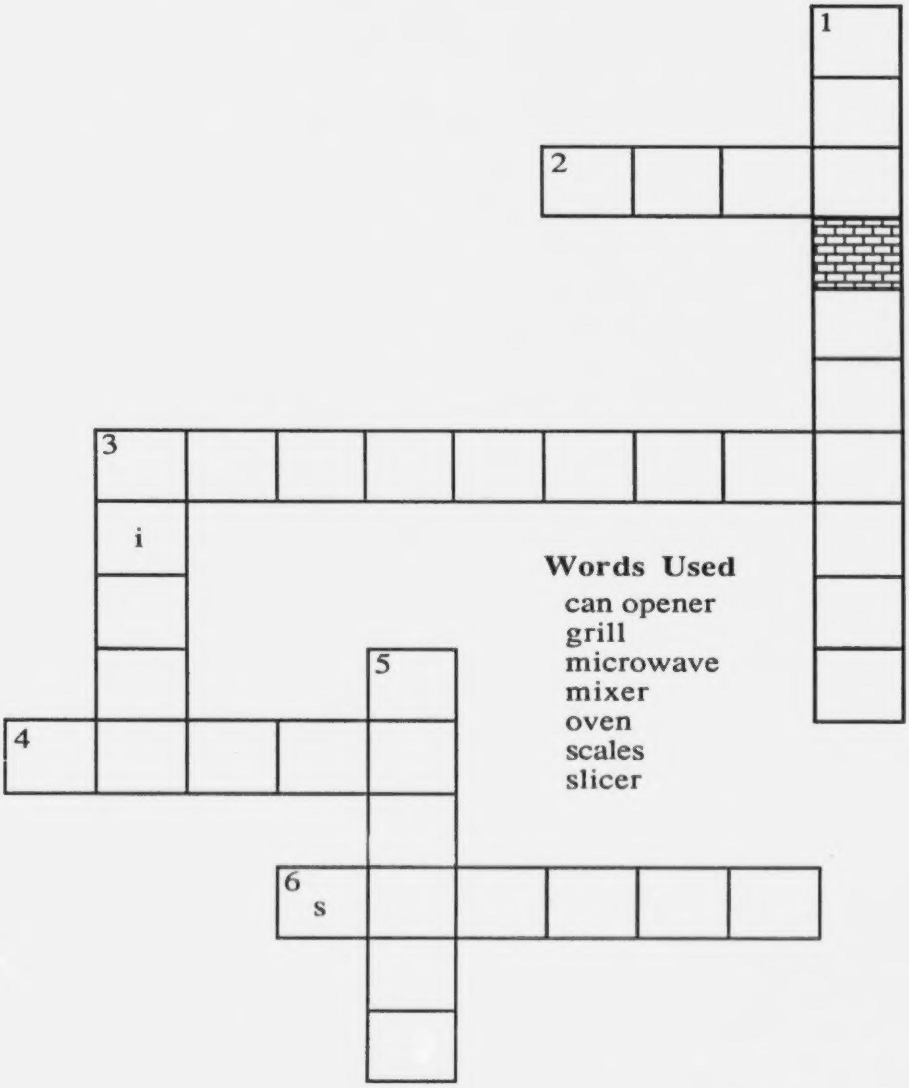
_ _ _ _ _ _ _ _ _

5. 7 3 4 8 5 2 7 6 8 3 6

_ _ _ _ _ _ _ _ _ _ _

ACTIVITY 10-2

DIRECTIONS: Use the clues at the bottom of this page to fill in the words in the crossword puzzle below. Some letters and the **Words Used** are provided for you.



Words Used
can opener
grill
microwave
mixer
oven
scales
slicer

Across

2- baking and roasting is done here
3- oven which cooks very fast
4- flat piece of metal used to cook hamburgers
6- used to weigh food

Down

1- used to open cans
3- used in making cakes and doughs
5- used to slice foods and cheeses

Chapter 11
Cold Storage, Serving, and Cleaning Equipment

COMPETENCIES TO DEVELOP

- Identify, select, and use large and small food service equipment.
- Clean, maintain, and store food service equipment and tools.
- Report equipment needing repairs to supervisor.
- Control and improve sequence of operations.

GOALS TO REACH

- Identify types of equipment used to store cold foods.
- Identify types of equipment used to hold and serve food.
- Identify types of equipment used for cleaning and disposing of wastes.
- Identify stations where you work (work stations) and plan where to put the tools needed at the work station.

Equipment for cold storage, hot and cold serving equipment, and dishwashing equipment is important. Cold storage equipment includes refrigerators and freezers. The four kinds of cold storage equipment are the walk-in, reach-in, roll-in and pass-through.

Refrigerators keep food cool. Refrigerators need to be kept clean. Spilled food should be cleaned up quickly. Freezers are used to store frozen foods. Freezers should also be kept clean. Food should be placed in air tight containers. If a refrigerator or a freezer does not work properly, tell the manager immediately.

Holding and serving eqiupment is needed to keep food at the right temperature. Warmers are used for hot foods. Cold food units are used for cold foods.

A steam table keeps food hot. It is a table with slots for pans. Hot water is beneath the pans. Some food warmers are waterless. Each type has a control for the temperature. Other types of warmers are heated pass-throughs, roll warmers, infrared lamps, heated carts, and heated pellets.

Cold food units are used to keep foods cold. A cold food server is filled with ice and the food is placed on the ice. This helps to keep food cold. A salad case is like a refrigerator with shelves. The salads are made and put in the case. Mobile refrigerators, or hot and cold carts, are other units that are used.

Cleaning equipment is important. A garbage disposer is used for waste. The garbage disposer grinds the waste then it goes down the drain. A garbage can is also used for waste disposal. The garbage can should have a tight fitting lid and a plastic liner.

Large pots and pans are usually washed in a large sink with three parts. The sink is called a pot and pan sink. The parts are for washing, rinsing, and sanitizing.

Dishwashers are used to wash the dishes. The two main types are the single-tank machine and the multiple-tank machine. Dishes should be washed in hot water and santized with chemicals or very hot water.

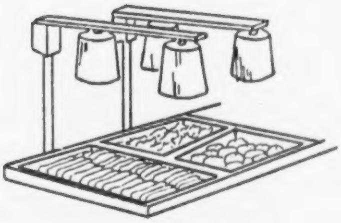
A food service business is divided into work stations. The name of the station shows the kind of work done at the station. Work stations may be for drinks, hot food, cold food, serving, and/or dishwashing.

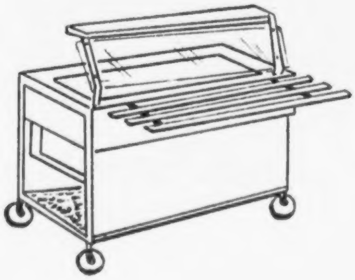
Points To Remember

- Cold storage equipment includes walk-in, reach-in, roll-in, and pass-through types.
- Holding and servicing equipment is needed to keep food at the right temperature.
- Cleaning and disposal equipment includes garbage disposer, pot and pan sinks, and dishwashers.
- A food service place is divided into work stations.

Words To Know

cold food server
cold food unit
cold storage
dishwashing machine
freezer
garbage disposer
heated carts
heated pass-through
heated pellets
infared lamp
pass-through refrigerator
pot and pan sink
refrigerator
reach-in refrigerator
roll-in refrigerator
roll warmer
salad case
steam table
walk-in refrigerator
warmer
waterless food warmer
work station





ACTIVITY 11-1

DIRECTIONS: Choose the word from the list below that best completes the sentence. Write the word in the blank.

dishwashers
freezers
garbage disposer
hot
hot water
pot and pan
refrigerators

1. Equipment used to keep foods cold are ____________________

   and ___________________.

2. Steam tables have ____________________ beneath the pans.

3. A ____________________ is used to grind waste.

4. Steam tables are used to keep food ____________________.

5. A large sink with three parts is called a ____________________ sink.

6. ____________________ are used to wash dishes.

Chapter 12
Food and Supplies

COMPETENCIES TO DEVELOP

- Receive and inspect food and supplies.
- Complete receiving records.
- Prepare food and supplies for storage, and then store.
- Maintain storage facilities at optimum conditions for food preservation.
- Issue and rotate food and supplies.

GOALS TO REACH

- Know the forms and qualities you can purchase food in.
- Describe the uses for food specifications (way to tell if food is good).
- Identify the kinds of supplies used in food service.
- Describe the ways to receive food and supplies.
- List ways to store food and supplies.
- Know ways to keep track of food and supplies.

Food and supplies are important to food service businesses. A person must be in charge of ordering them. Food and supplies are ordered by using a purchase order. When the foods and supplies arrive, they should be checked, then stored.

How food is bought depends on what foods are sold and how much money there is to spend. Foods may be bought in fresh, frozen, canned, or dehydrated forms.

Foods must meet certain standards. A standard is a measurement of quality. These standards make sure that the food is good to eat. There are standards which explain how the food should look, feel, and the size it needs to be. The quality of a food is shown by grading. Food quality is graded from good to poor.

Labels on food products must have certain information. This is required by the government. Labels have the name of the food, weight of the product, size and number of servings, and a list of ingredients.

Written instructions or specifications are provided when food and supplies are ordered. They list what foods and supplies will be bought and the standard that is wanted.

Food service businesses need supplies other than food. These supplies include dishes, flatware, and glasses. Disposable and single serving items include napkins, straws, paper towels and individual serving packets of catsup, mustard and jam. The supplies needed depend on the type of food service business. Cleaning supplies are needed for dishwashing and other cleaning.

It is important that the food and supplies be checked carefully when they arrive. Check for correct product size and condition. Some food must be weighed when delivered.

After the food and supplies have been checked, they must be stored properly. Each product should be marked with the date received, name of the seller, product name, and amount received. Food should be used on a "first-in, first-out" basis.

The food and supplies should then be stored. Food that may spoil is put in refrigeration. Frozen foods should be put in the freezer. The other type of storage is dry storage. The dry storage area must be clean, well lighted, and have good air circulation.

An inventory is a count of food and supplies in stock. This helps businesses know how much food and supplies have been used and what needs to be ordered.

Points To Remember

- Purchase orders are used to order foods and supplies.
- There are standards that food must meet.
- Labels are required by the government.
- Supplies used in a food service business may be dishes, flatware, glasses, napkins, straws, paper towels, and individual serving packets of catsup, mustard, and/or jam.
- Food and supplies must be checked carefully when they arrive.
- Food should be used on a "first-in, first-out" basis.
- Food and supplies may be stored in refrigerators, freezers, or in dry storage.
- Inventories show how much food and supplies are on hand.

Words To Know

disposable
first-in, first-out
food preservation
forms of food
grading
ingredients
inventory
labels
optimum
purchase order
quality
rotate
single serving items
specifications
standard
stock
storage
supplies
written instructions

ACTIVITY 12-1

DIRECTIONS: Find and circle the words listed below in the word search puzzle. The **Words Used** are listed below. Words in the puzzle are written across and down. The first word is circled for you.

Words Used

food
supplies
standards
quality
grading
labels
inventory
storage
service

Word Search--Food and Supplies

i	n	v	e	n	t	o	r	y	g
t	n	k	o	b	w	z	g	l	o
o	f	o	o	d	l	r	r	a	s
s	e	r	v	i	c	e	a	b	t
q	p	l	r	a	e	z	d	e	o
u	s	q	o	b	m	e	i	l	r
a	a	c	q	n	m	e	n	s	a
l	x	l	p	r	g	h	g	f	g
i	s	u	p	p	l	i	e	s	e
t	s	t	a	n	n	a	t	s	b
y	o	o	d	i	c	o	w	n	m
q	s	t	a	n	d	a	r	d	s
v	n	m	k	y	u	d	s	x	v

ACTIVITY 12-2 **DIRECTIONS:** Circle the word that answers the questions.

1. What does someone need to order more supplies?

inventory
purchase order
label

2. What gives information about the food?

label
inventory
processed

3. Food that may spoil is placed where?

inventory
dry storage
refrigeration

4. How do we show quality of food?

grading
processed
purchase order

5. What shows how much food you have left?

grading
standard
inventory

Chapter 13
Food Preparation Techniques

COMPETENCIES TO DEVELOP

- Adjust standard recipes to serve more or fewer people.
- Read and follow recipe instructions.
- Use food preparation and service terms correctly.
- Assemble and prepare ingredients (or suitable substitutes) and equipment.
- Measure and weigh foods according to specifications in standard recipes.
- Use a variety of cooking techniques.
- Identify use and store spices, herbs, and extracts properly.
- Utilize convenience foods in food preparation.
- Use correct time and temperatures for energy efficient food preparation.
- Set up and maintain individual work area utilizing time- and energy-saving techniques.

GOALS TO REACH

- Find the information contained in a standard recipe.
- List abbreviations used in standard recipes.
- Explain standard substitutions (things one can use to replace some ingredients in a recipe) for ingredients.

- Define words (terminology [tur-mun-ol-oh-gee]) used in food service.
- Adjust recipes so they will produce more or less food.
- Explain the five methods of cooking.
- Identify seasonings used in food preparation.
- Describe sanitary methods for tasting food.

Recipes are a set of instructions used for making food. A standard recipe will give the same result each time the recipe is made. A recipe will help in controlling food preparation cost.

Recipes give the following information:

1. Ingredients and amount of ingredients
2. Utensils and tools to use
3. Steps to follow in making the recipe
4. Method, temperature, and time
5. Serving size or portion
6. How much the recipe makes or yields

Ingredients are the foods used to make a recipe. Most ingredients are weighed or measured. Methods are listed on a recipe. Methods tell how to prepare foods, cooking time, and temperature.

Some words are written shorter in recipes. These are called abbreviations. They save time and space in writing. Some common abbreviations are as follows:

c = cup
° F = degrees Fahrenheit
doz. = dozen
gal. = gallon
hr. = hour
lb. = pound
qt. = quart

sec. = second
sq. = square
T., tb., tbsp. = tablespoon
t., ts., tsp. = teaspoon
temp. = temperature

Substitutions are used with some recipes. Substitutions are used when an ingredient is not available and another ingredient is substituted. Substitutions are used to save time or money and to use extra food. Some common substitutions are as follows:

1 sq. of chocolate = 3 T. cocoa and 1 T. fat
1 T. cornstarch = 2 T. flour (for thickening)
1 c. milk = 1/2 c. evaporated milk and 1/2 c. water
1 c. sour milk or buttermilk = 1 c. fresh milk plus 1 T. vinegar or lemon juice
1 t. baking powder = 1/4 t. soda and 1/2 t.cream of tartar

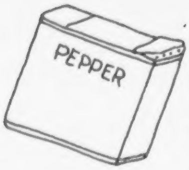
Recipes sometimes need to be adjusted. This will give a different number of servings. This is done by putting in more or less of the ingredients. Some recipes list different amounts of ingredients for different numbers of serving. The manager should decide how large of a recipe to make.

Food service workers should read the recipes carefully before beginning. Food preparation workers should make sure that they know all of the recipe terms. Plan time so that the recipe can be finished at the proper time. Ingredients must be assembled, measured, and weighed. Follow all the directions exactly for the best results.

Five methods of cooking food are dry heat, moist heat, fat, combination, and liquid food extracts. Dry heat is used in baking cakes and roasting meats. Moist heat is used in cooking with liquids or boiling and simmering foods. Hot fat is used to deep fry and grill fry. Combination cooking uses the dry and moist heat and fat methods together. Examples of combination cooking are braising or pot roasting. The last method is cooking with liquid food extracts. Foods prepared using this method include soups, sauces, and gravies.

Seasonings are used to flavor foods. Seasonings include herbs, spices, salts, extracts, and condiments. Herbs are plants with a strong flavor. Some examples are basil, dill, garlic, onion, and oregano. Spices are from stems, seeds, bark, or leaves. Examples of spices are black pepper, cinnamon, clove, ginger, and nutmeg.

Spices are also used to add flavor. Salts improve the flavor. Extracts are usually liquid and add flavor. Examples of extracts are vanilla and peppermint. Condiments include items such as catsup, mustard, and steak sauce.



Spices, herbs and extracts should be stored in dark, cool places. If not, they will lose their color and flavor. Seasonings should be added at the time the recipe states.

Tasting food is a method of quality control. Sauces and gravies can often be improved by adding seasonings. When tasting always use a clean spoon for each taste. The tasting spoon should never be placed back into the food. The cooking spoon should never be used for tasting.

A convenience food is a food that is partially prepared. This saves time and sometimes money. Convenience foods may be fresh, frozen, canned, or dehydrated. Most foods can be bought in convenience forms.

Work at a food service business should be kept as simple as possible. Work should be done the easiest and quickest way to produce quality products and results. Some employees are given time schedules to help them know what is expected of them. It will list the jobs to be done that day.

Timing is very important. Food should be finished at the right time. Timing is also important when using the equipment. Only one person can use a piece of equipment at a time.

Workers should plan their work space to save time and motion. Having needed tools and supplies in the work space makes the work easier. A supervisor can help do this.

Steps to make work easier

1. Plan ahead
2. Avoid unwanted movement
3. Get all supplies together before starting
4. Use the best tools for the job
5. Clean as you work

Food is served in portions. Standard portions mean that all servings are the same size. This controls the cost and makes customers happy.

The appearance of foods on a plate is important. Do not let foods run together. Make sure that the right size plate is used.

Points To Remember

- Recipes are a set of instructions for making food.
- Standard recipes include ingredients, tools needed, directions, methods, and amounts.
- Abbreviations are used to save time and space in writing recipes.
- Substitutions mean that ingredients in a recipe are changed.
- Recipes should be read and followed carefully.
- Five methods for cooking foods are dry heat, moist heat, fat, combination, and liquid food extracts.
- Seasonings are used to flavor foods.
- Convenience foods are foods that are partially prepared.
- When working at a food service business, keep jobs simple and quick.
- Planning time is very important.
- Standard portions mean that all servings are the same size.

Words To Know

- abbreviation
- combination cooking method
- condiments
- convenience foods
- dry heat
- extracts
- fat
- food preparation
- herbs
- ingredient
- liquid food extract
- method
- moist heat
- recipe
- seasonings
- spices
- standard portion
- standardized recipe
- substitution
- temperature
- yield

Time Schedule for Bake Station Date 10/7/84

Product Biscuits

Time of Serving 12 noon D. Jones, head cook

Job	Time Needed	Time for Completion
Pre-preparation	20 min.	11:30
Mix & cut biscuits	10 min.	11:40
Preheat oven	10 min.	11:40
Biscuits in oven	12-15 min.	11:55
Service	3-5 min.	12:00

ACTIVITY 13-1

DIRECTIONS: Use the following words to complete the statements related to recipe use.

ask
beginning
directions
exactly
ingredients
plan
recipe
substitutions
understand
use

1. Read the __ __ __ __ __ __ carefully before beginning.
2. Assemble all the __ __ __ __ __ __ __ __ __ __ __.
3. Measure or weigh __ __ __ __ __ __ __ .
4. __ __ __ __ __ __ __ __ __ __ each term used.
5. Make __ __ __ __ __ __ __ __ __ __ __ __ __ in ingredients only when told to.
6. Get out the needed tools and utensils, and equipment or suitable substitutes before __ __ __ __ __ __ __ __ __ .
7. __ __ __ __ so that the product will be finished at the proper time.
8. Arrange the ingredients, tools, untensils, and equipment in the order of __ __ __ .
9. Follow the __ __ __ __ __ __ __ __ __ __ exactly as given.
10. Never guess; when in doubt __ __ __ .

ACTIVITY 13-2

DIRECTIONS: Place an X in the space provided to the left of the statements which are sanitary procedures and an O to the left of those which are not.

_______ 1. Tasting food indicates if additional seasonings are needed.

_______ 2. Tasting foods is a means of quality control.

ACTIVITY 13-3

DIRECTIONS: Write the word for each of the following **abbreviations** used in standard recipes.

1. **1 lb.** sugar ______________________________
2. Cook at **350° F** ______________________________
3. **2 c.** water ______________________________
4. Beat for **10 min.** ______________________________
5. Let stand **20 sec.** ______________________________
6. **1 t.** salt ______________________________
7. **5 doz.** cookies ______________________________
8. **2 tbsp.** chopped onions ______________________________
9. **1 T.** cornstarch ______________________________
10. **5 oz.** coconut ______________________________
11. **1 tsp.** cinnamon ______________________________
12. **10 gal.** water ______________________________

ACTIVITY 13-4 **DIRECTIONS:** Write the abbreviations for each word that is in ***italics*** in the following.

Answer		Amount	Ingredient
__________	1.	3 ***pounds***	Beans, kidney
__________	2.	1 ***gallon***	Water, boiling ADD
__________	3.	9 ***pounds***	Beef, ground
__________	4.	8 ***ounces***	Onion, chopped ADD
__________	5.	1 1/2 ***quart***	Tomato puree
__________	6.	high **temperature**	
__________	7.	3-4 ***ounces***	Cumin seed, ground
__________	8.	3 ***tablespoons***	Salt
__________	9.	***(gallons)***	Water to make a total volume of 3 ***gallons*** ADD
__________	10.	***(hours)***	Let simmer about 3 ***hours*** , while stirring
__________	11.	5 ***teaspoons***	Vanilla
__________	12.	2 ***cups***	Water, cold

Chapter 14
Beverages

COMPETENCY TO DEVELOP

- Prepare a variety of non-alcoholic beverages.

GOALS TO REACH

- Identify types and forms of beverages frequently prepared in food service.
- Describe menu uses of various beverages.
- Outline steps in preparing various beverages.
- Identify quality standards for serving and garnishing various beverages.

Drinks served at a food service business are called beverages. The beverages commonly served are tea and coffee. Other beverages served may be hot chocolate, milk, fruit juice, and soft drinks. The beverage station is where hot and cold drinks are made.

Beverages are served before, during, or after meals. Iced water is usually served as soon as customers sit down. Coffee is sometimes served after meals.

Basic guidelines to follow in making good beverages include the following:

1. start with good ingredients
2. follow the directions
3. keep equipment clean
4. serve drinks right after they are made

Iced water is usually served first. To make iced water, begin with a cold glass. **Never** dip the glass into the ice machine. It could break. Use tongs or a scoop to place ice in a glass. Fill the glass with water.

Many people drink coffee. Coffee can be brewed or instant. Brewed coffee is made from ground coffee beans and water. To make good coffee by the brewing method follow these directions:

1. Use only clean equipment
2. Use a clean coffee filter or bag
3. Use only fresh coffee
4. Use the correct amounts of coffee and water
5. Use the correct temperature of water
6. Brew as directed
7. Remove grounds immediately
8. Serve only fresh coffee

Instant coffee is served in single serving packages with hot water. Coffee is served black without cream and sugar. Each person can add sugar or cream if they want it.

Tea is served in most food service businesses. Iced tea is liked by many people. Some people like hot tea more. Tea is steeped. To steep tea, the tea leaves are soaked in hot water for a short period of time. Three methods for making iced tea are

1. Make strong hot tea steeped 4-6 minutes, then pour over ice.
2. Pour hot tea mix into cold water.
3. Mix instant tea in cold water.

Milk is sometimes served at food service businesses. Milk should be stored in the refrigerator. It should be served very cold. Hot chocolate is served most frequently in the winter months. A spoonful of whipped cream, a marshmallow, shaved chocolate, or a cinnamon stick may be used as a garnish. Milk shakes are served in many fast food businesses.

Fruit and vegetable juices are usually served at breakfast. They should be served cold.

Soft drinks are popluar beverages. Most food service businesses have special machines for soft drinks. Fill cups half full of ice before filling with sodas.

Points To Remember

- Food service businesses serve many types of beverages.
- To make good drinks start with quality ingredients, follow directions, keep equipment clean, and serve drinks as they are made.
- Coffee can be brewed or instant.
- Tea may be served hot or cold.
- Milk should be served cold.
- Milk shakes are served in most fast food businesses.
- Fruit and vegetable juices are usually served for breakfast.
- Special machines are used for serving soft drinks.

Words To Know

beverage
beverage station
brewed coffee
instant coffee
milk shakes
soft drinks
steeped

ACTIVITY 14-1

DIRECTIONS: To review the menu uses, quality standards, and holding and storing procedures for various beverages, answer the following questions in the space provided.

1. What are the two most frequently prepared beverages in food service?

____

____

2. What is a beverages station?

____

____

3. Which beverage might be served before a meal?

____

4. What beverage is frequently served after a meal?

____

ACTIVITY 14-2

DIRECTIONS: In the space provided, summarize the steps in the preparation of the following beverages.

1. Iced water

2. Brewed coffee

3. Instant coffee

4. Hot tea

5. Iced tea

Chapter 15
Cold Sandwiches

COMPETENCY TO DEVELOP

- Prepare hot and cold sandwiches.

GOALS TO REACH

- Identify types of cold sandwiches.
- Identify ingredients used in making cold sandwiches.
- Describe methods for preparing cold sandwiches.
- Describe ways to garnish and serve cold sandwiches.
- Outline procedures for holding and storing cold sandwiches.

Most food service business sell sandwiches. They are fast, filling, and easy for customers to eat. They can be a meal or snack.

Sandwiches have different numbers of slices of bread. A regular sandwich has 2 slices of bread. Small regular sandwiches may be called tea sandwiches. Open-faced sandwiches have 1 slice of bread. Very small open-faced sandwiches are called canapes. Club or decker sandwiches have 3 or more slices of bread. There are specialty sandwiches which use special kinds of bread. The bread used may be a hot dog bun, hamburger bun, English muffin, rye bread, or others.

The three parts of sandwiches are the bread, spread, and filling. Bread for sandwiches can be white or dark, soft or hard. Bread is easier spread if it is cold.

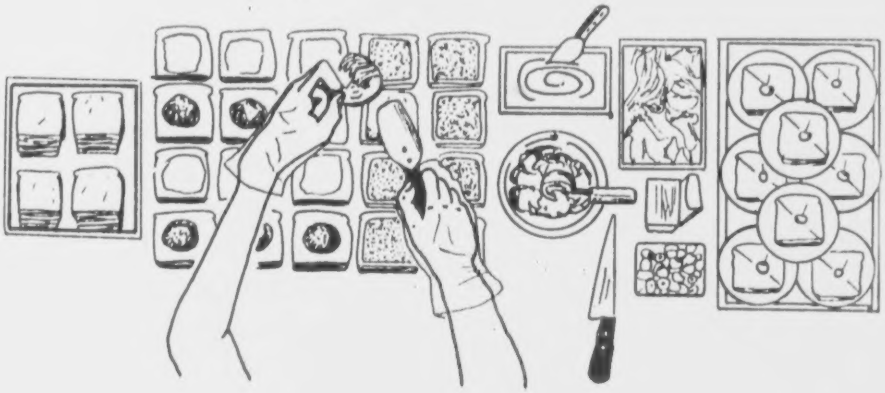
A spread is a thin coating used on one side of sandwich bread or buns. Butter, margarine, and mayonnaise are the most common spreads. Cream cheese, peanut butter, and mustard can also be used.

The sandwich filling is placed between the slices of bread or buns. Dry fillings include sliced meat or cheese. Moist fillings are made from chopped meats or cheeses. Some have mayonnaise mixed with them. Spreads and fillings made with mayonnaise should be refrigerated.

There are two main steps in making sandwiches. The steps are making the sandwich parts (spreads and/or fillings) and assembling the sandwiches. Ingredients for a sandwich should be cold before making the sandwich. Sandwiches can be made one at a time or in multiples. When starting to make sandwiches assemble all ingredients and equipment that are needed. If more than one worker is making the sandwich, a production or assembly line can be used. Each worker is given a special job to do during sandwich preparation. For example, one worker may place the spread on the bread. While another worker adds the filling.

Sandwiches can be cut in different shapes. They are then arranged on a plate to look nice. Garnishes can be used to make sandwiches look appealing. Garnishes may fill the empty space on a plate. Some garnishes are parsley, carrot sticks, olives, lettuce, tomato slices, or fruit slices.

Sandwiches should be wrapped or covered to make them airtight. This keeps the bread from drying out. Sandwiches should be stored in the refrigerator until they are ready to be served.



Points To Remember

- Sandwiches can be eaten at any meal.
- Three common sandwich types are regular, open-faced, and club.
- The three parts of sandwiches are the bread, spread, and filling.
- A spread is a thin coating used on one side of the sandwich bread or bun.
- The sandwich filling is the ingredient placed between the slices of bread or buns.
- The two steps in preparing sandwiches are (1) the preparation of sandwich ingredients and (2) assembling the sandwich.
- Sandwiches can be cut in different shapes and sizes.
- Garnishes are used to make sandwiches look appealing.
- Sandwiches should be wrapped airtight and stored in a refrigerator until ready to serve.

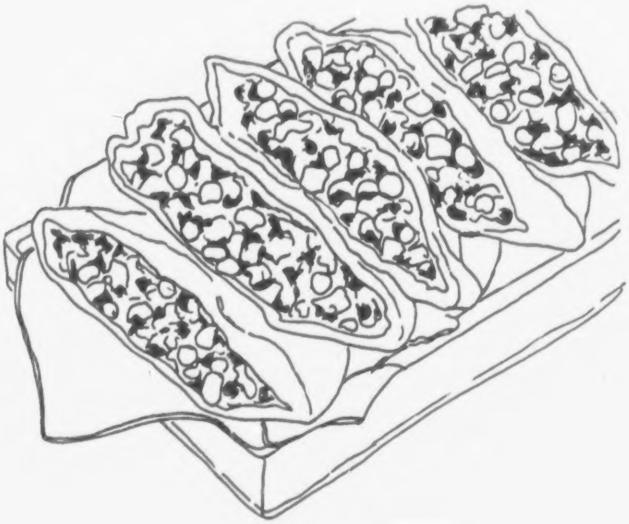
Words To Know

assemble
canape
club sandwich
decker sandwich
dry filling
filling
garnish
mayonnaise
moist filling
multiples
open-faced sandwich
production line
regular sandwich
sandwich
specialty sandwich
spread
tea sandwich

ACTIVITY 15-1

DIRECTIONS: Place the letter of each **Type of Sandwich** in the blank to the left of its **Description**. Use each letter only once.

Answer	**Description**	**Type of Sandwich**
______	1. Sandwich made with two slices of bread.	A. Canape
______	2. Very small open-faced sandwich.	B. Club or Decker
______	3. Sandwich made with three slices of bread.	C. Open-faced
______	4. Sandwich made with a special bread.	D. Regular
______	5. Sandwich made with one slice of bread.	E. Specialty
______	6. Small regular sandwich.	F. Tea



Chapter 16
Salads

COMPETENCY TO DEVELOP

- Prepare salad and salad dressings.

GOALS TO REACH

- Identify types of salads.
- Describe menu uses of salads.
- Describe the basic parts of a salad.
- Name the basic types of salad dressings.
- Identify various salad ingredients.
- Describe the steps in preparing and storing salad ingredients.
- Describe procedures for preparing combination, molded, and arranged salads.
- Describe procedures for serving and garnishing salads.
- Summarize procedures for holding and storing salads and salad dressings.

Three types of salads are combination, arranged, and molded. Combination salads are those that have several ingredients mixed together to make a salad. Examples of combination salads are green, vegetable, fruit, and cooked. Green salads should have greens that are torn into bite-size pieces. If a knife is used it should be sharp. Vegetable salads may have beets, carrots, tomatoes, peas, or other vegetables. The vegetables can be fresh, cooked, canned, or marinated. Marinate means to soak in a sauce. Fruit salads have fruit in them. Peaches, apples, oranges, and bananas are commonly used in fruit salads. Cooked salads are the last type of salad. These are made from cooked foods. Some examples are potato salad, macaroni salad, and egg salad.

Arranged salads are salads that are put on a plate to look nice. Eggs, meats, cheese, fruits, and vegetables are used in these salads.

The third type of salad is the molded salad. Gelatin is used as a base. Either plain or flavored gelatin can be used. Ingredients such as fruits, vegetables, or meats can be added to gelatin.

Salads are divided by their menu use. Salads may be served as appetizers, entrees, side dishes, or desserts. Appetizer salads are served at the beginning of a meal and are usually small. Entree salads are large salads and usually contain meat, eggs, or cheese. They are used as the main dish of the meal. Side dish salads go along with the main dish. These do not usually include meats. An example is cole slaw. Dessert salads are a nice colorful end to a meal. They are sweet and light. They have fruit and nuts in them.

Salad bars are popular. The salads and ingredients are made to look nice. Customers can choose what they want to eat.

The three basic parts of a salad are the base, body, and dressing. The base is the bottom layer of the salad. A leafy vegetable is often used. This helps the salad look nice. The body is the main part of the salad. It may include meats, eggs, cheese, fruits and vegetables. The dressing adds flavor to the salad. Three basic types of salad dressing are French, mayonnaise, and cooked dressings. French dressing has an oil base. Mayonnaise is a thick smooth dressing. Cooked dressings are thick and tart. They are thickened with eggs, cornstarch, or flour.

When using greens for salads, they should be carefully washed. This is to remove any dirt and insects. Remove any leaves that are bruised or torn. To clean lettuce the core must be removed. This is done by hitting it on a sharp edge, then twist the core to remove it. A knife may also be used to remove the core. Run water into the hole, turn the lettuce over, and drain. Salad greens should be stored tightly covered. They should be kept in the refrigerator. Fruits and vegetables used in salads should be in good condition. They should not have bruises or brown spots. Fresh fruits and vegetables used should be washed before using in salads.

Only the best eggs should be used in salads. To make hard cooked eggs, the eggs should be at room temperature. Place the eggs slowly into boiling water. Reduce the heat to stop boiling. Cook for 12 minutes or until hard. Cool under cold running water. Another method of cooking eggs is the cold water method. The egg is covered with cold water. Bring the water to a boil. Cover the pan. Turn off the heat. Allow the eggs to set for 10 minutes. Cool them under cold running water. Cooked eggs should be refrigerated until served.

Molded salads are made with gelatin. Mixing gelatin with water makes the liquid thicken. Refrigeration makes it semi-solid. To make gelatin, mix gelatin with a small amount of hot liquid until it dissolves. Unflavored gelatin must be soaked in cold water for five minutes. Then, add the hot water or liquid. Fruit flavored gelatins do not need soaking. After the gelatin has dissolved, add cold liquid to help it thicken fast. When the gelatin begins to set add the solid food. Gelatin must be refrigerated until serving time.

To remove gelatin from a mold, run warm water into a sink or pan. Put the bottom of the mold into the warm water for a few seconds. Shake the mold to see if the gelatin moves. When loosened, dry the outside of the mold. Place a plate on top of the mold and, holding the plate firmly in place, quickly turn the plate and mold over. The gelatin should come out easily. Return the salad to the refrigerator until serving time. Planning is the key to making salads. Many things can be made before needed and stored. Keep salad ingredients cold. Dressing should be added to green and vegetable salads just before serving. This helps to keep them from wilting.

Points To Remember

- The three basic types of salads are combination, arranged, and molded.
- Combination salads have several ingredients mixed together.

- Combination salads include green salads, vegetable salads, fruit salads, and cooked salads.
- Arranged salads are salads that are put on the plate to look nice.
- Molded salads use either plain or flavored gelatin.
- Appetizer salads are small salads served before a meal.
- Entree salads are served as the main course of a meal.
- Side dish salads are served with the main course of a meal.
- Dessert salads are sweet and light and served after a meal.
- The three basic parts to a salad are the base, body, and dressing.
- The three basic types of salad dressings are French, mayonnaise, and cooked.
- Greens should be washed and drained before using.
- Only the best eggs should be used in salads.
- Gelatin may be used alone or with fruits, vegetables, or meats.
- Planning is important in making salads.

Words To Know

appetizer salad
arranged
base
body
combination
cooked dressing
dessert salad
dressing
entree salad
French dressing
gelatin
marinated
mayonnaise
molded
salad bar

ACTIVITY 16-1

DIRECTIONS: Unscramble the three words below to reveal the three basic parts of a salad. Write the unscrambled words on the broken lines. Then write a description of the basic salad part on the solid lines.

Scrambled Word **Part of Salad**

1. sbae ___ ___ ___ ___

Description: ____________________

____

____

____

2. ybdo ___ ___ ___ ___

Description: ____________________

____

____

____

3. sgdinser ___ ___ ___ ___ ___ ___ ___ ___

Description: ____________________

____

____

____

Chapter 17
Appetizers

COMPETENCY TO DEVELOP

- Prepare appetizers and garnishes.

GOALS TO REACH

- Name the basic types of appetizers.
- Describe procedures for preparing appetizers.
- Describe procedures for serving appetizers.
- Describe procedures for holding and storing appetizers.

An appetizer is a small amount of food used to make a person hungry. They should be light and tasty. Appetizers are divided into seven groups as follows:

1. Hors d'oeuvres
2. Canapes
3. Spreads and dips
4. Cocktails
5. Relishes
6. Salads
7. Soups

Hor d'oeuvres are small bits of food served before a meal. They can be hot or cold. Meat, fish, cheese, eggs, vegetables, and fruits may be used to make hor d'oeuvres.

Canapes are small open-faced sandwiches. They are sometimes served at parties. They have 3 parts which include the base, spread, and garnish. The base may be small pieces of bread, toast, or crackers. The spread usually is butter or margarine mixed with mayonnaise, cheese, or mustard. The garnish is then added to make it look nice. The main ingredient is used as part of the spread or as the garnish. It may be eggs, cheese, fish, or meats.

Spreads used as appetizers are similar to sandwich fillings. The spreads are served in a dish with crackers and breads around. Dips are softer spreads. Chips, bread sticks, vegetables, and fruits are used with dips.

Cocktails can be beverages, fruit, or seafood. A beverage cocktail is made with fruit or vegetable juice. Fruit cocktails can use fresh or canned fruit. Seafood cocktails are made with shrimp, crab, or other seafoods.

Relishes are crisp vegetables, pickles, or olives. Salads are usually small and light. They may be vegetable or combination salads. Thin clear soups are used as appetizers. Examples of soups used as appetizers are broth and bouillon.

Most appetizers are made before serving time. An assembly line can be used to make them. Appetizers should be stored in a refrigerator. They should be covered. Appetizers should not be held at room temperature for more than 4 hours. The food will spoil.

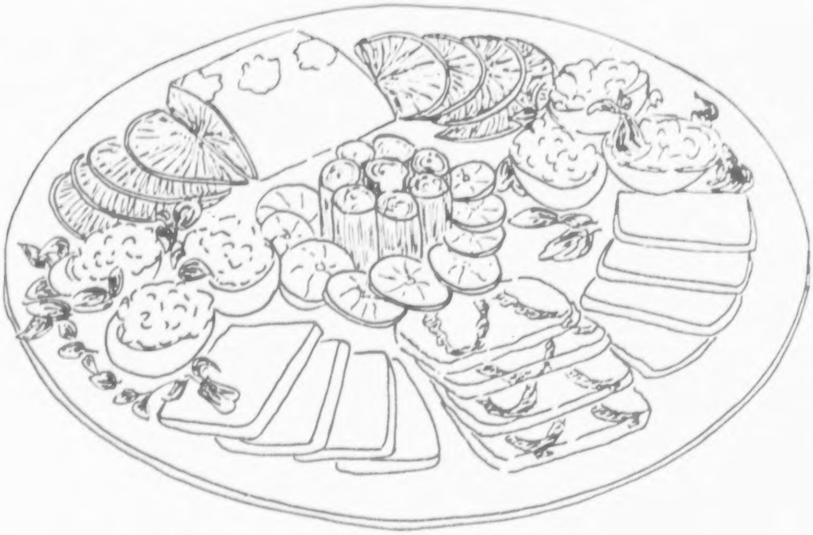
Points To Remember

- Appetizers are used to make a person hungry.
- The seven groups of appetizers are hor d'oeuvres, canapes, spreads, dips, cocktails, relishes, salads, and soups.
- Hor d'oueuvres are bite-sized pieces of food.
- Canapes are open-faced sandwiches.
- Spreads are similar to sandwich fillings and dips are soft spreads.
- Cocktails can be beverages, fruits, or seafood.

- Relishes are crisp vegetables, pickles, or olives.
- Appetizer salads are small and light.
- Thin clear soups may be used as appetizers.
- An assembly line can be used to make appetizers.
- Cold appetizers should be refrigerated until ready to use.
- Hot appetizers should be served hot.

Words To Know

appetizer
assembly line
cocktails
dips
hors d'oeuvres
relishes
spreads



ACTIVITY 17-1

DIRECTIONS: Unscramble the following letters to reveal the basic types of appetizers. The words are provided for you. Then place the numbered letters in the correct blank to spell a word that completes the mystery sentence.

canapes
cocktails
hors d'oeuvres
relishes
salads
soups
spreads and dips

1. rshsilee ___ ___ ___ ___ ___ ___ ___ ___

2. kscicaotl ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
1

3. usops ___ ___ ___ ___ ___
2

4. aspcaen ___ ___ ___ ___ ___ ___ ___
6

5. dpsernipadsasd ___ ___ ___ ___ ___ ___ ___
4
___ ___ ___ ___ ___ ___ ___

6. daslas ___ ___ ___ ___ ___ ___
5

7. sdvoheuroers ___ ___ ___ ___
___' ___ ___ ___ ___ ___ ___ ___
3

Appetizers are served before the main ___ ___ ___ ___ ___ ___ of a meal.
1 2 3 4 5 6

ACTIVITY 17-2

DIRECTIONS: Place the letter of each **Type of Appetizer** in the blank to the left of its **Description**. Some letters are used more than once.

Description

_____ 1. Food mixtures similar to sandwich fillings

_____ 2. Soft spreads into which chips, bread sticks, vegetables, and fruit are dipped.

_____ 3. Consists of crisp vegetables, pickles, or olives.

_____ 4. Served in a dish with crackers, and bread sticks around.

_____ 5. Includes either alcoholic or non-alcoholic beverages

_____ 6. Consists of fruit, salad greens, or seafoods.

_____ 7. Includes broth, and bouillon

_____ 8. Can be made of shrimp or crab.

Types of Appetizers

A. Beverage cocktails
B. Dips
C. Relishes
D. Salads
E. Seafood cocktails
F. Soups
G. Spreads

Chapter 18
Soups and Sauces

COMPETENCY TO DEVELOP

- Prepare soups, sauces, and gravies.

GOALS TO REACH

- Describe procedures for preparing and using different stocks.
- Identify the types of soups and their characteristics.
- Describe menu uses of soups.
- Describe procedures for preparing soups.
- Describe procedures for garnishing and serving soups.
- Identify basic sauces and their uses.
- Describe procedures for preparing basic sauces.
- Describe procedures for holding and storing soups and sauces.

Soups and sauces can be made from different liquids. Stock and milk are the most commonly used.

Stock is the liquid in which vegetables or meat is cooked. The stock is strained to remove the large pieces. It is then cooled and the fat removed. The four basic stocks are white, brown, poultry, and fish. White stock is made from raw bones and scraps of veal or chicken. Brown stock is made from bones and scraps of beef which has first been browned in the oven. Poultry stock is made from backs, necks, wing tips, and scraps of meat from poultry. Fish stock is made from bones and meat of fish.

Soups have either a stock base or a milk base. They can be thin or thick. A type of thin soup is bouillon. Thin soups are often served as appetizers. Thick soups are thickened by a starchy food. Flour, potatoes, or rice can be used. Soups can be thickened by a mixture of fat and flour. This is called roux.

Vegetable soups are made from stock with vegetables added. There are special soups from different countries. They are often a whole meal. Some soups are served cold.

Hot soups should be served hot. Cold soups should be served cold. Hot soups should be cooled rapidly before refrigerating. Place the pot of soup in a deep sink surrounded by cold running water. Stir the soup with a large spoon to make it cool faster. Refrigerate when the soup cools to room temperature.

A sauce is a flavored stock which is used with another food. There are basic sauces. A brown sauce is made from roux (fat and flour) and brown stock. A tomato sauce has tomatoes, tomato juice, or tomato paste as its base. A white sauce is made from roux and white stock.

Gravies are meat-flavored sauces made from the drippings of meat. The drippings can be thickened.

Cold sauces are often made with tomato or mayonnaise base. They are like the dressing on salads.

Sweet sauces are served with desserts or meats. They are divided into whipped creams, sugar syrups, fruit sauces, hard sauces and egg sauces. Sugar syrups are made by melting sugar and flavoring in water or milk. Sugar syrups are sauces like chocolate or butterscotch. Fruit sauces are used with meats. A hard sauce is made from butter, powdered sugar, eggs, vanilla, and flavorings. Frosting is an example of a hard sauce.

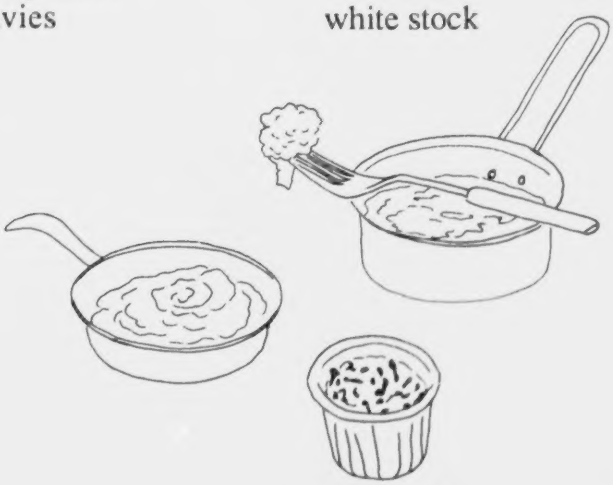
Egg sauce types are foamy sauces and egg custards. Foamy sauces are made with beaten egg whites or whipped cream. Custards are cooked, sweet mixtures of milk and eggs. Custards should be stored in the refrigerator.

Points To Remember

- Stock is liquid in which vegetables or meat is cooked.
- Soups have either a stock or milk base.
- A thin soup is called bouillon.
- A sauce is a flavored stock which is used on another food.
- Gravies are meat-flavored sauces made from the drippings of meat.
- Cold sauces are often made with a tomato or mayonnaise base.
- Dessert and some meats are served with sweet sauces.

Words To Know

bouillon
brown sauce
brown stock
cold sauce
cream sauce
egg custard
egg sauce
fish stock
foamy sauce
gravies
hard sauce
poultry stock
roux
sauce
stock
sugar syrup
sweet sauce
tomato sauce
white sauce
white stock



ACTIVITY 18-1

DIRECTIONS: The numbers below are an alphabet code. Each number stands for a letter in the alphabet. Look at the number under the blanks in the sentences. Find the letter that goes with each number. Then write that letter in the correct blank.

5	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**
15	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
k	**l**	**m**	**n**	**o**	**p**	**q**	**r**	**s**	**t**
25	**26**	**27**	**28**	**29**	**30**				
u	**v**	**w**	**x**	**y**	**z**				

1. ___ ___ ___ ___ ___ is ___ ___ ___ ___ ___ ___ in which
23 24 19 7 15 16 13 21 25 13 8

___ ___ ___ ___ ___ ___ ___ ___ ___ ___
26 9 11 9 24 5 6 16 9 23

or ___ ___ ___ ___ is cooked.
17 9 5 24

2. Most ___ ___ ___ ___ ___ have either a ___ ___ ___ ___ ___ base
23 19 25 20 23 23 24 19 7 15

or a ___ ___ ___ ___ base.
17 13 16 15

3. A thin soup is called ___ ___ ___ ___ ___ ___ ___ ___.
6 19 25 13 16 16 19 18

Chapter 19
Meat, Poultry, and Fish

COMPETENCY TO DEVELOP

- Prepare meat, seafoods, and poultry.

GOALS TO REACH

- Define the term entree.
- Identify the types and cuts of meat, poultry, and fish available.
- Identify the forms of meat, poultry, and fish available.
- Describe factors to consider when selecting meat, poultry, and fish.
- Identify menu uses of meat, poultry, and fish.
- Summarize principles of cookery for meat, poultry, and fish.
- Outline methods for cooking meat, poultry, and fish.

MEAT

In food service, meat means beef, veal, pork, or lamb. Beef is meat from full grown steers. Veal is from baby calves. Pork is meat from pigs or hogs. Lamb is meat from sheep.

The government has standards for meat. These are quality guides. The tenderness and appearance of the meat are a sign of the quality. Good quality tender beef has a bright red color. Cooked or uncooked meat can spoil fast. Meat should be stored in the refrigerator for not more than 3 days. Meat can be frozen to store for longer time periods.

Meats can be used as the main dish for a meal. Casseroles have other ingredients added to the meat. Vegetables, noodles, rice, cheese, and sauces can be used.

Meats may be cooked with dry or moist heat or with fat. Dry heat is when no water is added. Dry heat is best for tender cuts of meat. Examples of dry heat cooking are roasting, broiling, grilling, and panbroiling. Moist heat is used to cook less tender cuts of meat. Water or other liquids are used in moist heat cooking. Examples of moist heat cooking are braising, stewing, and boiling. Sauteeing and deep-fat frying are ways of cooking meat in fat. Oven frying is used to cook large amounts.

POULTRY

Poultry is the term used to identify birds that are raised for food. The most common types of poultry are chickens, turkeys, ducks, and geese. Poultry is divided into groups by the way it is cooked and the age and sex of the bird. Chickens are called broilers, fryers, or roasters. Turkeys are called broilers or roasters.

Poultry may be bought whole or in parts. It can be purchased fresh, frozen, or canned.

There are also government standards for poultry. Poultry is graded on shape, quantity of meat, cleanliness, and general condition of the bird.

Poultry will spoil fast. It should be kept in the coldest part of the refrigerator. It can be refrigerated for 2 to 3 days. Poultry can be stored for up to one year if frozen.

Poultry is used in different ways in menus. Chicken may be used for sandwiches or served boiled, broiled, fried, or baked. Turkey is often served at Thanksgiving.

Poultry can be cooked by dry, moist, or fat cooking methods. The type of chicken or turkey will help decide how to cook it. Very young chickens and turkeys can be broiled. Young poultry can also be fried. Mature poultry should be braised or stewed.

FISH

The fish served in food service may be finfish or shellfish. Finfish are bony and have fins. They can be fresh or salt water types. Shellfish have soft bodies covered by a shell. Shrimp, crab, and lobsters are examples of shellfish.

Fish may be bought fresh, frozen, or canned. It can be bought whole or cut into pieces. Shrimp can be purchased fresh or frozen, cooked or uncooked. Lobsters and crab can be bought live (or fresh), cooked, frozen, or canned.

Fish can be served as an appetizer or as the main dish of a meal. Fish can be served for any meal.

Fish will spoil quickly. Fresh fish should be used within twenty-four hours. Fish can be kept longer when frozen. Canned fish should be used the day the can is opened.

Cooking fish depends on the type of fish. Fish is naturally tender and cooks fast. Cooking fish brings out its natural flavor.

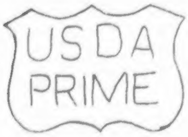
Points To Remember

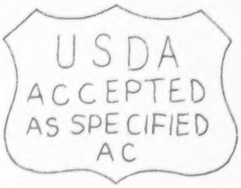
- Meat includes beef, veal, pork, and lamb.
- The government has standards to grade the quality of meat.
- Both cooked and uncooked meats spoil fast.
- Meats can be used in many ways.
- Meat can be cooked by dry or moist heat methods or cooked in fat.
- Poultry is the word used for birds that are raised for food.
- Chickens are called broilers, fryers, or roasters. Turkeys are called broilers or roasters.

- Poultry is used in many ways in menus.
- The fish served in food service may be finfish or shellfish.
- Fish may be bought fresh, frozen, or canned.
- Fish may be the main dish of the meal or it can be served as an appetizer.
- Fish will spoil very quickly, so it should be stored properly.

Words To Know

beef
boil
braise
broil
broilers
deep-fat-fry
dry heat
finfish
fish
fryers
grill
lamb
meat
moist heat
panbroil
pork
poultry
quality grades
roast
roaster
saute
shellfish
steers
stewing
tender
veal





ACTIVITY 19-1

DIRECTIONS: Find the hidden types of fish below by filling in each blank with the letter that best completes the word. The **Words Used** are listed below the puzzle.

1. ⓕ ___ ___ u ___ d ___ ___

2. ___ ___ ___ ___ ___ ___ ⓘ ___ h

3. ⓢ ___ ___ m ___ ___

4. ___ ⓗ r ___ ___ p

5. ⓣ ___ ___ u ___

6. ___ ___ ___ ⓨ f ___ ___ ___

7. ___ ___ a ⓟ ___ ___ r

8. ___ o ___ ___ t ⓔ ___

9. ___ r ___ ⓢ ___ ___ ___ ___ a ___ ___

Words Used:

crayfish
crustaceans
flounder
lobster
salmon
shellfish
shrimp
snapper
trout

Chapter 20
Eggs and Cheese

COMPETENCIES TO DEVELOP

- Prepare eggs and egg dishes.
- Prepare cheese and cheese dishes.

GOALS TO REACH

- Identify parts and grades of eggs.
- Identify menu uses of eggs.
- Describe various methods of fixing eggs.
- Summarize ways of storing eggs and egg dishes.
- Identify various kinds of cheese.
- Outline reasons for selecting cheese.
- Identify menu uses of cheese.
- Describe ways for fixing cheese and cheese dishes.
- Summarize ways for holding and storing cheese.

Eggs are used in many ways in cooking. They can be used for main dishes usually at breakfast. They can also be used as an ingredient in a recipe.

An egg has 3 main parts: the white, the yolk, and the shell. The yolk is the yellow part of the egg. The color of the shell does not change the quality of the egg.

Many eggs are graded for freshness and size. Freshness is decided by the size and shape of the white and the yolk. Eggs are graded AA, A, or B. Grade AA is the best. The size of eggs is based on their weight per dozen.

Eggs can be bought fresh, frozen, or dried. Dried eggs are eggs with the water taken out. Liquid is added to the eggs before using.

Frozen eggs that have thawed and dried eggs with the water added can spoil very fast.

Eggs can be served at anytime. Fried and scrambled eggs are popular at breakfast. Egg sandwiches can be eaten at lunch. Eggs are also used in pies, cookies, and soups.

Eggs should be cooked at low to medium temperatures. They should be cooked for a short time. High temperatures and overcooking cause eggs to toughen and discolor.

Eggs used for a main dish can be cooked in many ways. They can be cooked in the shell, fried, poached, baked, scrambled, or omelets. To cook eggs in the shell, use eggs at room temperature, put them into boiling water. Simmer the eggs until they are done. Fried eggs are cooked in a small amount of fat. Poached eggs are cooked in a small amount of water. Baked eggs are put in a muffin tin or small cup. They are cooked in a medium oven for about 15 to 20 minutes. Scrambled eggs are made by beating eggs. A small amount of milk or water may be added. Omelets are made by mixing eggs with salt and pepper. Cheese, meats, or other seasonings may also be used. Egg whites are used in place of or with a leavening agent for angel food and sponge cakes. Eggs can also be used as an ingredient in many recipes.

Eggs in the shell will last longer when stored in a refrigerator. All egg dishes should be served right away. Egg dishes should be stored in the refrigerator to stop the growth of bacteria.

Cheese is a milk product made from cow's, sheep's, or goats' milk. Most cheese is made from cow's milk. Cheese is chosen by how it will be used. A good cheese for cooking should melt, blend, and have a strong cheese flavor. Cheeses can be natural, processed, or pasteurized (pass-ture-eyes).

Natural cheeses are made from milk mixed with a starter. They can be grouped by hardness: hard, semihard, semisoft, and soft. Process cheeses are made from a combination of ground cheeses. They are then blended together.

Cheese is available in many types and forms. Cheese can be bought packaged, in jars, or canned. It can be bought sliced, grated, or cubed.

Cheese can be served alone or with other foods. Cheese is popular for sandwiches. It can be served with fruits and vegetables or as a main dish. Cheese can also be used as a garnish.

Cheese can be used cooked or uncooked. To use uncooked, cut with a knife into slices, strips, or chunks. Cheese can also be grated. When cooking cheese, cook it at a low temperature for a short time. Overcooking cheese causes it to become tough and stringy.

To store cheese tight, cover or wrap it. Store it in the refrigerator. Soft cheeses go bad faster than hard cheeses.

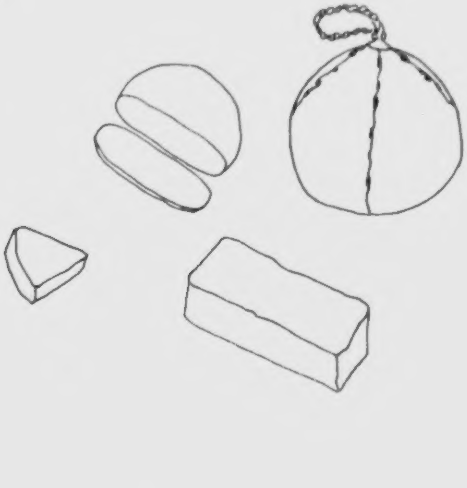
Points To Remember

- An egg consists of a white and a yellow portion (yolk) inside a shell.
- Eggs are graded for freshness and size.
- Eggs can be bought fresh, frozen, or dried.
- Eggs can be served at any meal.
- Eggs should be cooked at a low to medium temperature for a short time.
- Eggs cooked as a main dish may be cooked in the shell, fried, poached, scrambled, baked, or as an omelet.

- Eggs may also be used as an ingredient in a recipe.
- Cheese is a milk product made from the milk of cows, sheep, or goats.
- Cheese can be grouped as natural, processed, or pasteurized.
- Cheese may be grouped as hard, semihard, or soft.
- Cheese has many uses. It can be served alone, combined with other foods, the main ingredient in a dish, or grated and put on top of a dish.
- Store cheese tightly covered or wrapped inside the refrigerator.

Words To Know

baked eggs
dried eggs
freshness
fried eggs
frozen eggs
grated
hard cheese
natural cheese
omelet
poached eggs
processed cheese
scrambled eggs
semihard cheese
semisoft cheese
shell
soft cheese
thawed
white
yolk



ACTIVITY 20-1

DIRECTIONS: Fill in the blanks with the correct answer. The **Words Used** are provided.

Words Used

- blend
- foods
- hard
- low
- melt
- milk products
- natural cheese
- processed cheese
- refrigerator
- sandwiches
- soft

1. Most cheese is made from ____________ ____________.

2. Cheese made from milk and starters is called ____________ ____________.

3. Cheese made from combining other cheeses is ____________ ____________.

4. Cheese is popular for ____________.

5. Cheese can be served alone or with other ____________.

6. Cheese should be stored in the ____________.

7. ____________ cheeses go bad faster than ____________ cheeses.

8. A good cooking cheese should ____________, ____________, and have a strong cheese flavor.

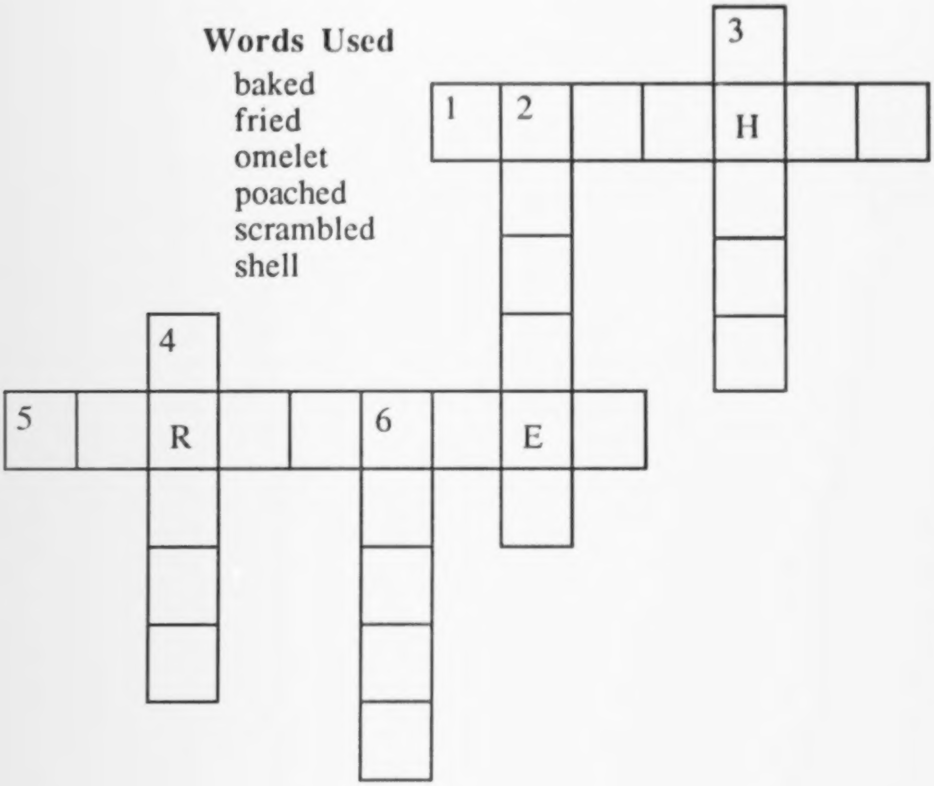
9. Cheeses should be cooked at ____________ temperatures.

ACTIVITY 20-2

DIRECTIONS: Use the clues below to fill in the words in the crossword puzzle. Some letters and the **Words Used** are provided.

Words Used

baked
fried
omelet
poached
scrambled
shell



ACROSS:

1- Cooked with a small amount of water.
5- Cooking beaten eggs.

DOWN:

2- Mixing egg with meats or cheese
3- Protects the egg.
4- Cooked with a small amount of fat.
6- Eggs cooked in an oven.

Chapter 21
Cereal and Pasta

COMPETENCY TO DEVELOP

- Prepare cereals and pasta products.

GOALS TO REACH

- Identify cereals and pastas.
- Outline ways for selecting cereals and pastas.
- Describe menu uses of cereals and pastas.
- Describe methods of fixing cereals and pastas.
- Summarize ways of holding and storing cereals and pasta products.

Cereals and pastas are made from grain. Grain is a seed that can be eaten. It comes from certain grass plants. The main grains are wheat, rice, oats, barley, rye, corn, and buckwheat. Pastas are macaroni products. They are also made from grains.

Processed grains may be either unrefined or refined. The terms unrefined and whole-grain mean the same thing: all of the seed has been used. Refined means that only part of the seed was used. Sometimes extra vitamins have to be added to refined products. These products are called enriched.

Breakfast cereals are made from corn, oats, rice, wheat, or a combination of grains. They may be rolled, puffed, flaked, or shredded. Cereals may have other things added to them like raisins.

Rice is served whole. It may be served alone or with other foods. It may be brown, white, enriched, converted, or wild.

The best pastas are made from wheat. Pasta comes in four main shapes: tubes, rods, ribbon-like strips, and special shapes.

Grains can be served at any meal. Breakfast cereals are usually served in the morning. Some are served hot and others cold with milk. Rice is often served along with meat, poultry, or fish. Pastas when combined with other foods can be used as main dishes. They can also go along with a meal.

The amount of water needed for cooking varies with the cereal or pasta. Cooking times also vary. Cereals and pastas should not be overcooked. They will become mushy or gummy if overcooked. Cereals should be cooked until soft. Pastas should be tender but firm. Salt is added to the boiling water used to cook cereals or pastas. It is used to add flavor.

In food service businesses cold cereals are served in individual boxes. Hot cereals are fixed just before serving. Pasta dishes should be served hot.

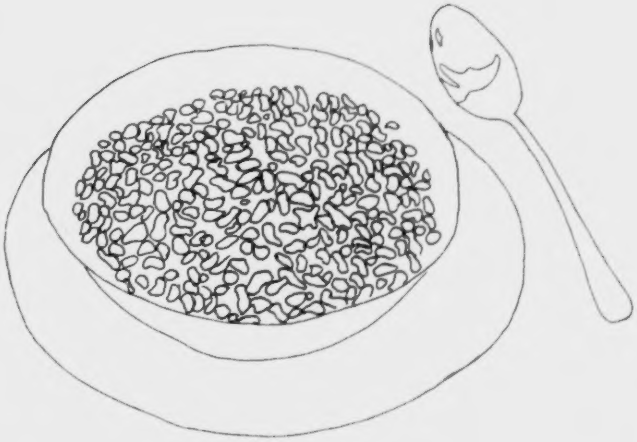
Points To Remember

- Cereals and pastas are made from grains.
- Processed grains can be either refined or unrefined.
- Breakfast cereals are made from different grains.
- Rice may be brown, white, enriched, converted, or wild.
- Pasta comes in four main shapes: tubes, rods, ribbon-like strips, and special shapes.
- Grain products may be served at any meal or with any part of the meal.

- The amount of water and the time required for cooking cereals and pastas varies.
- Cereals and pastas should be served right after they are made.

Words To Know

cereal
enriched
flaked
grain
gummy
mushy
pasta
puffed
refined
ribbon-like strips
rice
rods
rolled
special
tubes
unrefined
whole-grain



ACTIVITY 21-1

DIRECTIONS: Write the letter of each definition next to the word it defines.

_________ 1. cereals
_________ 2. grain
_________ 3. macaroni
_________ 4. pasta
_________ 5. refined
_________ 6. rice
_________ 7. salt
_________ 8. spaghetti
_________ 9. unrefined
_________10. whole-grain

a. seed that can be eaten
b. macaroni products
c. used for breakfast
d. uses all the grain seed
e. uses part of the grain seed
f. another word for unrefined
g. served whole
h. added to water when cooking cereals or pastas
i. type of tube pasta
j. type of rod pasta

ACTIVITY 21-2

DIRECTIONS: Underline the best answer.

1. Cereal and pastas are made of
   a. rice.
   b. grain.
   c. eggs.
   d. wheat.

2. Refined means
   a. uses part of the seed.
   b. method of cooking pasta.
   c. uses all of the seed.
   d. method of cooking cereals.

3. A shape of pasta can be
   a. wild.
   b. enriched.
   c. whole.
   d. tube.

Chapter 22
Vegetables and Fruits

COMPETENCY TO DEVELOP

- Prepare vegetables and fruits.

GOALS TO REACH

- Summarize factors in choosing vegetables and fruits.
- Identify menu uses of vegetables and fruits.
- Describe preparation needed for vegetables and fruits.
- Summarize methods for cooking vegetables and fruits.
- Outline ways of garnishing vegetables and fruits.
- Outline ways of holding and storing vegetables and fruits.

A variety of vegetables and fruits are served in food service businesses. Vegetables and fruits are available in many forms because of modern methods of processing, transporting, and storage. Vegetables can be put in groups by the part of the plant, color, flavor, or amount of water.

Vegetables are most easily grouped by the part of the plant. There are seven main groups: tuber or root, bulb, stem, leaf, flower, seed, and fruit. A tuber is an underground stem or root. Beet, carrot, potato, and radish are tubers. A bulb is the rounded plant part that grows underground. Garlic and onion are bulbs. Stems are long or thin and grow above the ground. Examples of these vegetables include celery, asparagus, and mushroom. The leaf is the thin flat part of the plant that grows from the stem. Leaf vegetables are lettuce, cabbage, spinach, brussel sprouts, and mustard greens. A flower is the part of the plant that makes seeds. Vegetables which are flowers are cauliflower and broccoli. Seeds are the part of the plant which grow a new plant. Seeds which are eaten are beans, peas, and corn. Fruits contain the seed from the plant. Fruits which are in the vegetable class are cucumber, okra, squash, and tomato.

Fruits are grouped by shape, structure, and other things. There are six main groups of fruits: pomes, drupes, berries, citrus fruits, melons, and tropical fruits. Pomes are fruits with a core like an apple. Drupes have a large seed in the middle called a pit. Peaches or cherries are examples of drupes. Berries are small juicy fruits. Grapes and strawberries are examples of berries. Citrus fruits are juicy fruits which are divided into sections. Oranges are an example of citrus fruits. Melons have a hard thick skin. The seeds are in the middle. Watermelons and cantaloupes are popular melons. Tropical friuts are grown in hot humid places. Bananas and pineapples are tropical fruits.

Vegetables and fruits can be fresh, frozen, canned, or dried. Fresh ones should be firm and bright in color. They should not be underripe (too hard) or overripe (too soft).

Frozen vegetables and fruits may be cut, sliced, diced, or whole. Two or more vegetables or fruits may be mixed. They may be frozen alone or with a sauce.

Canned vegetables and fruits may be whole, cut, diced, or sliced. Vegetables are usually packed in water with a little salt. Fruits are packed in a sugar syrup. They should be stored in a dry storeroom.

The most common dried vegetables are beans and peas. Dehydrated vegetables and fruits have had the water taken out. Vegetables that are done this way are potatoes and onions. Examples of dried fruits are raisins, prunes, and apricots. Dehydrated fruits and vegetables should be stored in a tightly sealed container.

Vegetables are often served as a side dish. They may also be served as a main dish. Fruits are most often served fresh. They may be a snack or dessert.

Before eating fruits or vegetables, they should be carefully washed. This removes any dirt or bug spray. When peeling vegetables with a skin, like potatoes, peel only a thin layer.

Vegetables and fruits should be cooked in such a way that they keep their food value, color, flavor, and feel. Cooking softens them. It makes them less crisp. To keep the best qualities in fruits and vegetables, cook them in a little water for a short time. Overcooking causes a loss of nutrients, color, and flavor. It may also make them mushy.

Fresh and frozen vegetables and fruits may be cooked in many ways. They may even be cooked in the microwave. Canned vegetables are already cooked and need to be reheated.

Boiling is used for cooking vegetables. To boil vegetables or fruits follow these directions:

1. Bring salted water or liquid to a boil
2. Add fruits or vegetables
3 Bring the water back to a boil
4. Start timing when the water reaches a boil
5. Cook fruits or vegetables until tender
6. Drain the liquid from the cooked fruits or vegetables
7. Place in serving pans
8. Add seasonings

Steaming is another method of cooking. It is fast. It helps keep the nutrients and the color. Vegetables are placed in a pan with holes or a basket. The basket is then placed in a pan of boiling water. The steam cooks the vegetables.

Vegetables and fruits may also be baked. They can be baked whole or in pieces. Baked potatoes are very popular. Fruits may be baked in many ways. Fruits can be served whole, or in cobblers, pies, and breads.

Deep-fat frying cooks vegetables in very hot fat. Potatoes are a popular food to deep-fat fry. Broiling and microwaving is also used for cooking vegetables and fruits.

Vegetables may be garnished with spices and herbs. Vegetables can be combined to make them more colorful. Fruits may be garnished with ice cream, whipped cream, or nuts.

Cooked vegetables should be cooked in small quantities. They should be served as soon as they are made. Any leftovers should be refrigerated.

Points To Remember

- Vegetables are grouped by the part of plant, color, flavor, and amount of water.
- Fruits are grouped by shape and structure.
- Vegetables and fruits may be served at any meal and as any part of the meal.
- Vegetables and fruits should be carefully washed.
- Vegetables and fruits should be cooked in as little water as possible and for a short time.
- Boiling is the most popular method of cooking vegetables.
- Other methods of cooking are steaming, deep-fat frying, broiling, and microwaving.
- Vegetables should be served as soon as they are cooked.
- Leftovers should be stored in the refrigerator.

Words To Know

baked
berries
boil
broil
citrus fruits
dehydrated
diced
dried
drupes
melons
microwave
overcooking
overripe
pit
pomes
sliced
steam
tropical fruits
underripe

ACTIVITY 22-1

DIRECTIONS: Put an X in the blank to the left of each vegetable combination that you think would be attractive and colorful served together.

_________ green beans and mushrooms

_________ carrots and celery

_________ cauliflower and pearl onions

_________ potatoes and onions

_________ peas and green beans

ACTIVITY 22-2

DIRECTIONS: In the column, **Vegetable Garnishes**, put an X in blank to the left of each item you think would be appropriate garnish for vegetables. In the column, **Fruit Garnishes**, put an X in the blank to the left of each item that you think would be an appropriate garnish for fruits.

Vegetable Garnishes

_________ almonds

_________ sour cream

_________ cookie crumbs

_________ spices

_________ mint sprig

_________ herbs

Fruit Garnishes

_________ whipped cream

_________ pearl onions

_________ buttered bread crumbs

_________ shaved chocolate

_________ ice cream

_________ chopped nuts

ACTIVITY 22-3

DIRECTIONS: There are 12 different fruits in the **Word Search** below. The words are listed across or up and down. The first fruit, apples, is circled for you. The **Words Used** are listed below the puzzle.

Word Search--Fruits

b	c	a	n	t	a	l	o	u	p	e
a	s	t	r	p	e	a	c	h	o	w
p	a	c	l	e	r	s	t	a	w	a
p	i	n	e	a	p	p	l	e	g	t
l	b	n	g	r	g	k	i	t	r	e
e	o	r	r	n	g	e	m	n	a	r
s	t	r	a	w	b	e	r	r	y	m
c	p	a	p	r	i	c	o	t	l	e
b	z	t	e	t	g	w	a	t	i	l
l	b	a	n	a	n	a	n	p	m	o
p	i	n	a	o	r	a	n	g	e	n

Words Used

apples
apricot
banana
cantaloupe
grape
lime
orange
peach
pear
pineapple
strawberry
watermelon

Chapter 23
Breads

COMPETENCY TO DEVELOP

- Prepare breads.

GOALS TO REACH

- Identify types of breads.
- Identify the ingredients used in breads.
- Identify menu uses of breads.
- Describe methods of preparing breads.
- Sumarize methods for holding and storing breads.

Hot breads are popular in food service businesses. They can be made there or bought at a bakery,

The basic ingredients in all breads are flour, a liquid, and a leavener. Some breads also have flavoring, fat, and eggs. A leavener is a substance which makes the dough rise. When it rises it becomes fluffy and light. Breads are grouped by the leavener used. They can be quick breads or yeast breads.

Quick breads take less time to make than yeast breads. They use a quick acting leavener. They can use baking powder, baking soda, air, or steam. Some quick breads are muffins, biscuits, cornbread, pancakes, waffles, popovers, and some loaf breads.

Yeast breads rise slower than quick bread. Yeast is a very small plant that grows in warm temperatures. It needs sugar and starch to grow. Yeast breads can be plain or sweet. Sweet yeast breads are coffee cakes, sweet rolls, and doughnuts.

Flour, liquid, leavener, and salt are the basic ingredients in all breads. Sugar, fat, eggs, and flavoring can also be used. Flour is made from grain. The grain is ground until it is like a powder. White wheat flour is often used for breads. Wheat flour or rye flour are also used for breads.

The liquid used in breads is usually water or milk. Sour milk or buttermilk add a special flavor. Breads that use water are heavy and chewy. The crust is crisp. Milk makes the bread softer. It also adds flavor and nutrients.

A leavener is used to make the bread rise. Leaveners can be chemical, yeast, air, or steam. Chemical leaveners react with moisture and heat to form a gas. They act very fast. The two major types are baking powder and baking soda.

Yeast is placed in a small amount of lukewarm liquid. It is allowed to dissolved. Yeast works best at room temperature. The yeast dough is then placed in a warm place to rise.

Sugar makes yeast grow. It also adds flavor and softens the yeast. Salt improves the flavor of breads and keeps the yeast from growing too fast.

The fat used in bread may be shortening, lard, margarine, butter, or oil. Fat adds flavor and helps the bread brown. Eggs add color, flavor, and food value.

Breads may be served at any part of the meal. Breads are very popular at breakfast. Breads may be a side dish or part of the main dish. Breads are even served as desserts.

Quick breads need little mixing. The two methods used most are the muffin method and the biscuit method. In the muffin method, the dry ingredients and the liquid ingredients are mixed separate. They are then combined. The batter is usually lumpy. The muffin method is used for making muffins, pancakes, waffles, and popovers.

In the biscuit method, dry ingredients are combined. The fat is then blended in using a pastry blender. The liquid is added last. The dough is formed into a ball. The ball is placed on a lightly floured surface. The dough is then kneaded. Kneading is done by folding the dough and pressing with the heels of the hands. This helps mix the ingredients. The dough is then rolled out and cut into the shapes wanted.

Yeast breads involve more steps. After the ingredients are combined, the dough is kneaded. The dough is then allowed to rise until it doubles in size. The dough is then punched down, shaped, and placed in a pan to rise again. After the dough has risen it is baked. Yeast dough can be shaped in many different ways.

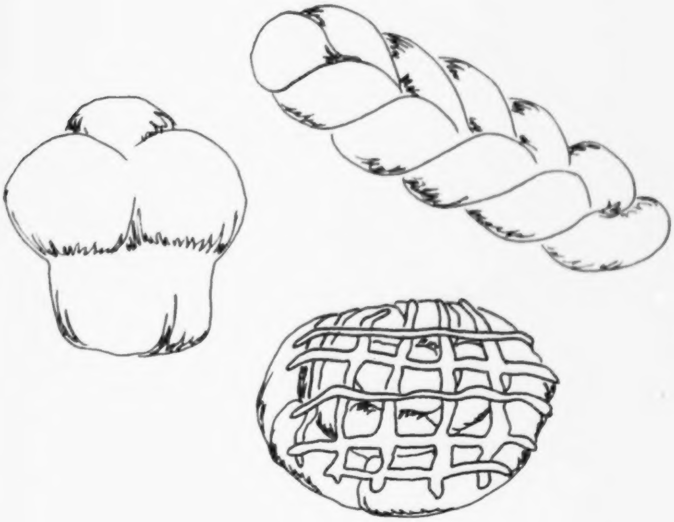
Bread can become stale quickly. It should be cooled and wrapped. The bread is then stored in an airtight, moisture-proof container. If the bread is not used right away, it can be frozen.

Points To Remember

- The basic ingredients in all breads are flour, a liquid, and a leavener.
- Breads are divided into groups by the leavener used.
- Quick breads take less time to make than yeast breads.
- Some quick breads are muffins, biscuits, cornbread, pancakes, and waffles
- Some yeast breads are coffee cakes, sweet rolls, and doughnuts.
- Leaveners make a bread rise. They can be chemical, yeast, air, or steam.
- Breads may be served as any part of the meal.
- Quick breads can be prepared by the muffin method and the biscuit method.
- Breads should be stored in an airtight moisture-proof container.

Words To Know

- airtight
- baking powder
- baking soda
- batter
- biscuit method
- chemical leavener
- dough
- flour
- knead
- leavener
- moisture-proof
- muffin method
- quick breads
- rise
- salt
- stale
- yeast
- yeast breads



ACTIVITY 23-1

DIRECTIONS: Test your knowledge of the various types of breads by completing the following activity. Place the letter of the best answer in the blank to the left of each item below.

____ 1. Quick breads include
A. biscuits, doughnuts, and popovers.
B. coffee cakes, Danish pastries, and doughnuts.
C. cornbread, muffins, and waffles.
D. doughnuts, pancakes, and sweet rolls.

____ 2. Sweetened yeast breads include
A. biscuits, doughnuts, and popovers.
B. coffee cakes, Danish pastries, and doughnuts.
C. cornbread, muffins, and waffles.
D. doughnuts, pancakes, and sweet rolls.

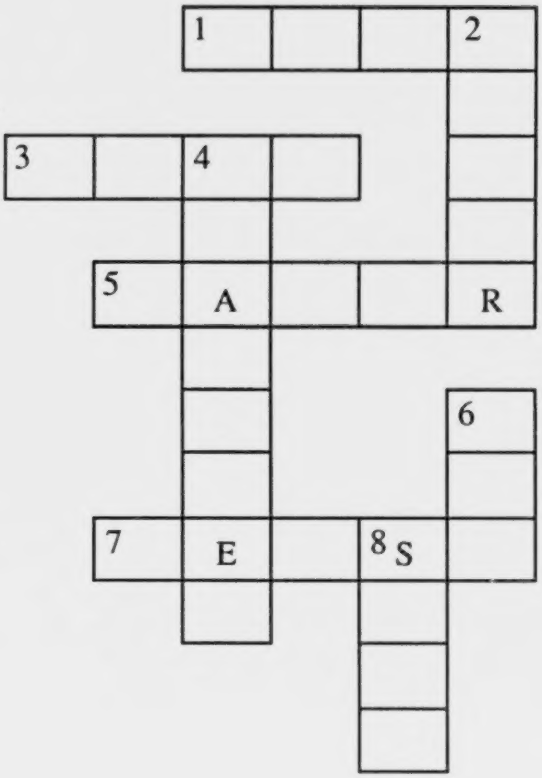
____ 3. Quick breads are **NOT** leavened by
A. air.
B. baking powder.
C. steam.
D. yeast.

____ 4. The basic ingredients in all breads are
A. flour, sugar, and water.
B. flour, liquid, and a leavener.
C. flour, liquid, and eggs.
D. yeast, salt, and milk.

____ 5. The muffin method of preparation is
A. dry and liquid ingredients are mixed separately.
B. dough is allowed to rise.
C. dough is kneaded.
D. fat is added to dry ingredients, then liquid is added.

ACTIVITY 23-2

DIRECTIONS: Use the clues to fill in the words in the crossword puzzle. Some letters are written in to help you. The words are listed beside the puzzle.



Words Used

eggs
fat
leavener
milk
salt
sugar
water
yeast

Across

1- adds color, flavor, and food value to bread
3- makes bread softer; adds flavor and nutrients
5- makes bread heavy and chewy
7- leavener used in making yeast breads

Down

2- speeds up the yeast; adds flavor
4- a substance which makes the dough rise
6- helps the bread brown
8- improves the flavor of breads

Chapter 24
Desserts and Cookies

COMPETENCIES TO DEVELOP

- Prepare fruit desserts and fried desserts.
- Prepare puddings, custards, souffles, gelatin dessert, and frozen desserts.
- Make cookies, cakes, pies, pastries, and meringues.

GOALS TO REACH

- Name types of desserts served in food service businesses.
- Summarize the ways for fixing different desserts.
- Describe methods for serving and garnishing desserts.
- Outline methods for holding and storing desserts.
- Identify the basic types of cookies.
- Summarize the ways for fixing different types of cookies.
- Describe methods for holding and storing cookies.

Desserts can be plain or fancy. Desserts may come in many types. This chapter will deal with fruit, gelatin, milk, frozen desserts, and cookies.

Fruit desserts can use fresh, frozen, canned, or dried fruits. Fresh fruits make a light dessert. They can be cut in many shapes. For a change, fruits may also be combined. Canned fruits are usually served cold. Frozen fruits are first thawed then served cold. Dried fruits may be served alone or as part of a dessert.

Fruits may be used as an ingredient in desserts. They can be combined with doughs or cakes or used to fill pastries. Some of these types of desserts are fruit turnovers, shortcakes, cobblers, and crisps.

Gelatin desserts may be simple or fancy. Gelatin whips are gelatins that have been beaten and then chilled to set. Gelatin creams are made when pudding or a custard are used to dissolve the gelatin.

Puddings and custards are the two main types of milk desserts. Puddings are grouped by the ingredient used to thicken them. Some of these ingredients are cornstarch, rice, or tapioca. Custard can be baked or soft. Soft custard is used as a dessert sauce. Custards are made from milk, eggs, sugar, and flavorings.

Frozen desserts include ices, sherbets, ice creams, ice milk, and parfaits. Ices are made from sweetened fruit juices. Sherbets are fruit juice and milk. Ice cream is made from cream, milk, and sugar. Ice milks have the same ingredients as ice cream but less fat. There are two types of parfaits. The first is a flavored custard with whipped cream and syrup frozen without stirring. The other type is a cold dessert made with layers of fruits, syrups, and ice cream.

Fruit desserts are the easiest to make. Fresh fruits like sliced bananas and apples need to be treated or they turn dark. A small amount of lemon juice can be used to treat the surface of bananas and apples.

Flavored and unflavored gelatin is used in dessserts. To make flavored gelatin dissolve the gelatin in boiling hot water. Cold water or fruit juice can be used for the remainder of the liquid. Place in the refrigerator until set. Fruit can be added after the gelatin has started to set.

Pudding and custard are very much alike. Both have milk, sugar, salt, eggs, and flavoring. The main difference is what is used to thicken them. Eggs are used to thicken custards. Cornstarch, flour, tapioca, rice, or bread are used to thicken puddings.

Most frozen desserts are based on commercially made ice cream. When serving ice creams, a scoop is used. The ice cream should be a little soft to make it easier to scoop.

When serving desserts, there are different types of garnishes available. Whipped cream is very popular. Fruit topping and sauces are also used. Desserts can be served either warm or cold.

Cookies are another type of dessert. They are small sweet finger foods. Cookies have the same ingredients as cakes, but they have more fat and flour and less sugar. They come in many flavors, shapes, sizes, and forms. The most popular are bar, drop, rolled, refrigerator, pressed, and molded.

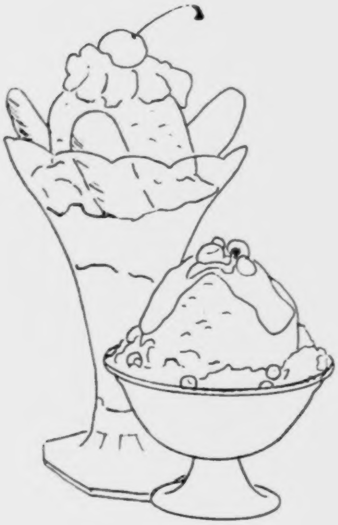
Cookies are easy to make. They are made by the muffin method or by the creaming method. The method of shaping cookies depends on how stiff the dough is. The baking time depends on the type of dough and the size and thickness of the cookie. Cookies are served at room temperature. They may be served with ice cream, fruit or pudding.

Points To Remember

- Desserts come in many varieties. They may be cookies, cakes, pastries, pies, fruit desserts, gelatin desserts, milk desserts, and frozen desserts.
- Fruit may include fresh, canned, frozen, or dried.
- Gelatin desserts can be simple or fancy.
- Puddings are thickened with cornstarch, flour, tapioca, rice, or bread. Custards are thickened with eggs.
- Frozen desserts include ices, sherbets, ice creams, ice milk, and parfaits.
- Fruit desserts are some of the easiest desserts to make.
- Flavored gelatins are dissolved in boiling hot water. The rest of the liquid that is added is cold.
- Puddings and custards are similar. Thickening agents are different.
- The types of cookies are bar, drop, rolled, refrigerator, pressed, and molded.

Words To Know

- cookie
- custard
- dough
- frozen desserts
- fruit desserts
- garnish
- gelatin creams
- gelatin desserts
- gelatin whips
- ice cream
- ice milk
- ices
- milk desserts
- parfaits
- pastries
- puddings
- sherbets
- thicken



ACTIVITY 24-1

DIRECTIONS: Identify the types of desserts in food service businesses by matching the Description of the dessert with the dessert type. Place the letter of the dessert **Description** in the blank beside the correct **Dessert Type**.

Dessert Type

______1. custards

______2. gelatin creams

______3. gelatin whip

______4. ice cream

______5. ices

______6. parfaits

______7. puddings

______8. sherbets

Description

A. when a pudding or custard is used to dissolve the gelatin
B. gelatin is beaten then chiled until set
C. milk dessert thickened with eggs
D. cold dessert made with layers of fruit, syrup and ice cream
E. frozen dessert made with sweetened fruit juice and milk
F. milk desserts thickened with starch
G. frozen dessert made with sweetened fruit juice
H. frozen dessert made from milk and sugar

Chapter 25
Cakes and Icings

COMPETENCIES TO DEVELOP

- Make cookies, cakes, pies, pastries, and meringues.
- Prepare and use icings, frostings, and fillings.

GOALS TO REACH

- Identify the types of cakes and their characteristics.
- Describe menu uses of cakes.
- Describe convenience cake products.
- Describe methods of fixing cakes.
- Summarize methods of cooling and storing cakes.
- Identify the types of icings, frostings, and fillings.
- Describe methods of fixing icings, frostings, and fillings.

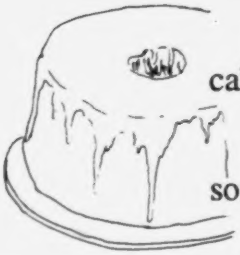
Cakes are moist, sweet desserts. They are served in many food service businesses. Cakes are grouped by the ingredients used. Those with shortening and chemical leaveners are called shortened. Those which use eggs as leaveners are called foam cakes. These do not use shortening. There are three main kinds of foam cakes: angel food, sponge, and chiffon.

Many types of cake mixes are available. Most require adding only water to the mix, others also require eggs and butter or oil. The directions should be carefully read when using a mix.

When not using a mix, high-quality ingredients must be used to make high-quality cakes. All cakes have flour, sugar, salt, eggs, leavening, and flavoring. Some also have shortening and liquid.

Cake flour is often used in cakes. When measuring flour for cakes, the exact amount should be used. Too much flour will make a tough cake. Too little flour will make the cake fall.

A fine sugar blends easier than regular white sugar. Careful measurement of sugar is also very important. Too much sugar will make a heavy cake, that may fall. Too little sugar results in a tough cake.



Butter, margarine, shortening (or oil) are the fats usually used in cakes. Shortening improves the texture and tenderness of the cakes.

Eggs are used to improve the color and the texture of the cake. In some cakes they are used as the leavener.

The leavener causes the cake to rise and become light. Shortened cakes use chemical leaveners. Foam cakes use eggs. The leavening action is produced by the air and steam from the beaten eggs.

The liquid used provides the moisture. Milk is most often used. Too much liquid makes a heavy, soggy cake. Too little liquid causes the cake to be tough.

The method of mixing is very important to the success of the cake. Two methods are used in mixing a shortened cake: the creaming method and the blending method. The creaming method first creams the softened fat with the sugar. The eggs are then beaten into the mixture. The dry ingredients are sifted together. A small amount of ingredients are blended with some of the milk until all the ingredients are used. The blend is then thoroughly mixed.

The blending method is used most often in food service businesses. It takes less time than the creaming method. Start by sifting the dry ingredients together. Shortening is then blended into the dry ingredients. The eggs, milk, and flavorings are mixed next. Half of the liquid is added to the dry ingredients and blended. The remaining liquid is added and blended until mixed.

The mixing methods for foam cakes are different from those used for shortened cakes. Beating the eggs puts air into the mixing. A lot of food service places use mixes for the foam cakes. They are easier to use. The directions must be followed carefully to have a successful cake.

The proper type, size, and shape of pan and treatment of the pan should be used for each cake. Shortened and sponge cakes are put into greased pans. Angel food and chiffon pans are left ungreased.

Cakes should be spread evenly in the pan. After filling the pan, hit it on the work surface gently to get rid of air bubbles. Cut through a foam cake, before baking, with a knife to get rid of the large air bubbles.

After mixing cakes should be baked as soon as possible. They should be baked at the correct temperature, and should be baked for the correct amount of time.

After baking, shortened cakes should be cooled a little in the pan on a rack. They are then removed from the pan. To remove, run a knife or spatula around the edges to loosen the cake. Turn it out on a rack to finish cooling. Foam cakes should be cooled by turning the pan and cake upside down. All cakes should be cooled before they are frosted. Cakes that are not going to be used right away should be wrapped in moisture-proof wrapping. They can then be stored in a refrigerator or freezer.

Frostings, icings, and fillings add to the flavor and appearance of a cake. Frostings are thick, fluffy, and spreadable. Icings are thin and pourable. Fillings are sweet. They are spread between layers of a cake. Fillings help hold the cake together.

Frostings and icings may be either cooked or uncooked. Uncooked icings and frostings are mixtures of powdered sugar. Some contain shortening. Cooked frostings have large amounts of sugar dissolved in a hot liquid. They are much more difficult to make.

Before cakes are frosted they are trimmed and leveled. All of the crumbs must be removed. A spatula is used to spread the frosting. Cakes may also be decorated for special events. Special tools are used to decorate cakes. Many different colors can be added to frostings for decorating cakes.

The size and shape of a cake tells how the cake is to be cut. They can be cut into many different sizes and shapes.

Points To Remember

- Cakes are popular desserts in food service businesses.
- Cakes are grouped by their ingredients. Those with shortening and chemical leaveners are called shortened cakes. Those using eggs as leaveners are called foam cakes.
- Some food service places use prepared mixes.
- All cakes contain flour, sugar, eggs, leavener, and flavorings. Many have shortening and liquid.
- Shortened cakes may be mixed by the creaming method or the blending method. Foam cake requires beating eggs to put air into the mixing.
- Pans for shortened cakes and sponge cakes should be greased. Pans for angel food and chiffon cakes are not greased.
- Frostings, icings, and fillings add to the flavor and appearance of a cake.
- Frostings and icings may be either cooked or uncooked.
- Cakes may be decorated for special events.
- The size and shape of a cake tells how the cake is to be cut.

Words To Know

angel food cake
blending method
cake
chiffon cakes
cooked icing
cooling
creaming method
decorated
filling
foam cakes
frosting
icing
shortened
sponge cake
uncooked icing

ACTIVITY 25-1

DIRECTIONS: Place the letter of the best answer in the blank to the left of each item below.

____ 1. Cakes are
A. made using yeast.
B. moist sweet desserts.
C. never sold in food service places.
D. always round.

____ 2. Shortened cakes are made with
A. extra flour.
B. eggs that have been beaten.
C. mixes.
D. shortening and chemical leaveners.

____ 3. Foam cakes are made with
A. extra flour.
B. eggs that have been beaten.
C. mixes.
D. shortening and chemical leaveners.

____ 4. Shortened cakes are made using which method?
A. creaming method
B. beating method
C. muffin method
D. batter method

____ 5. Foam cakes should be cooled by what means?
A. removed from pan, and cooled on plate.
B. removed from pan and cooled on a rack.
C. upside down in the pan.
D. cooled completely in refrigerator.

ACTIVITY 25-2

DIRECTIONS: The numbers below are an alphabet code. Each number stands for a letter in the alphabet. Look at the number under the blanks in the sentences. Find the letter that goes with each number. Then write that letter in the correct blank.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A	**E**	**I**	**O**	**U**	**L**	**N**	**R**	**S**	**T**

1. H___ gh-q___ ___ ___ ___ ___y ingredients must be
3 5 1 6 3 10

used to make h___ gh-q___ ___ ___ ___ ___y cakes.
3 5 1 6 3 10

2. All cakes have f___ ___ ___ ___, ___ ___g___ ___, salt,
6 4 5 8 9 5 1 8

___gg___, ___ ___ ___v___ ___ ___ ___g, and flavoring.
2 9 6 2 1 2 7 3 7

3. ___ ___g___ ___d___ ___ ___ ___ ___ should be carefully
3 7 8 2 3 2 7 10 9

m___ ___ ___ ___ ___ ___d to have a successful cake.
2 1 9 5 8 2

5. Cakes may be d___c___ ___ ___ ___ ___d for special
2 4 8 1 10 2

events.

Chapter 26

Pastry and Pies

COMPETENCY TO DEVELOP

- Make cookies, cakes, pies, pastries, and meringues.

GOALS TO REACH

- Identify the kinds of pastry products.
- Summarize menu uses of pastry products.
- Describe methods of fixing pastry dough.
- Identify the types of pastry fillings.
- Describe methods for fixing pastry toppings.
- Summarize the holding and storage of pastry products.
- Outline methods for garnishing and serving pastry products.

Pastry refers to baked products made from dough rich in fat. They usually have fillings and toppings. Pastries include cream puffs, puff pastry, tarts, turnovers, and pies.

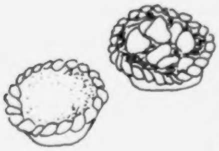
Pie crusts are used as the base for many things. A single crust pie has the crust at the bottom. Chocolate cream and lemon meringue are examples of these pies. The double crust pie has one crust at the bottom and another as a covering. These are usually filled with fruit.

Tarts are single-serving pies. They can have 1 or 2 crusts. Turnovers are usually triangular and filled with fruit or meat. They are cooked until browned. Some pastries are made from light pastry shells with a large hole in the center. This can be filled with a cream filling or whipped cream. These are called cream puffs or eclairs.

Pastries are usually thought to be desserts. But they can also be used in making main dishes or appetizers. Meat, poultry, or fish may be combined with vegetables and gravy and baked between two crusts of pastry.

Most pastries are made with flour, shortening, salt, and water. Correct measuring and proper mixing methods help in making quality pie crusts. Pie dough should be handled as little as possible. After mixing, it should have time to rest for several hours in a cool place. Dough can be rolled by hand or by machine.

Once the dough is in the shape needed, fold it in half. Place the fold in the center of the pan and unfold. Trim the crust edges evenly. The edges should be fluted. To flute, press the edge between the first finger and the thumb of one hand and the first finger of the other hand. If the crust is baked before filling, it should be pierced with a fork.



Pies are named for their fillings. The four kinds of pie fillings are fruit, cream, chiffon, and custard. The most popular fruit filling is apple. Cream-filled pies are thickened with milk and eggs. Popular flavors are banana, chocolate, and coconut. Chiffon fillings have egg whites or whipped cream added to the fruit or cream filling. Custard fillings are milk and egg mixtures baked in a single pie crust. Custard pies include egg custard, pumpkin, and chess pie.

Fixing pie fillings involves thickening the liquid. The filling should be able to hold its shape. It should also look and taste good.

Toppings add flavor and eye-appeal to pies. Cream and chiffon pies usually have a fluffy topping. Meringue is one type . It is a fluffy mixture of egg whites and sugar. The egg whites are beaten until they form soft peaks. The sugar is then added slowly. The meringue is placed on a cooked pie filling. It is swirled to form soft peaks. The meringue is then baked until lightly browned. Whipped cream is also used as a topping for cream and chiffon pies.

Fruit-filled pastries and pies may be garnished with cheddar cheese, ice cream, or whipped cream. Chiffon and meringue-topped pies are usually served ungarnished.

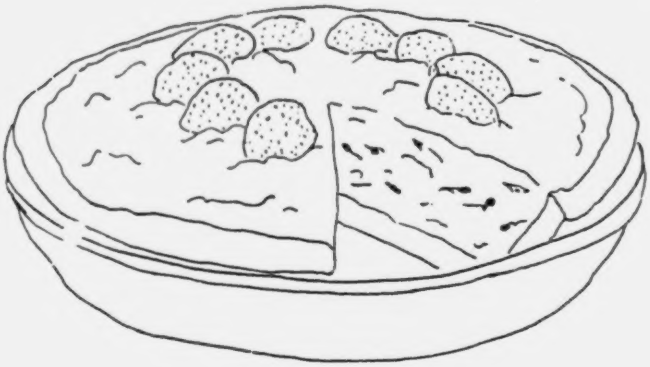
Most pastries taste best when served the day they are made. Pastries with eggs, milk, meat, poultry, or fish need special care. They must be refrigerated.

Points To Remember

- Pastries get their name from the crust used to make them.
- Pastries are usually desserts but can be served as appetizers or main dishes.
- Most pastries are made with flour, shortening, salt, and water.
- For quality pie crusts, correct measuring, proper mixing methods, and careful handling of dough are important.
- Pie fillings should hold their shape and look and taste good.
- Most pastries are best served the day they are made.

Words To Know

chiffon filling
cream-filled
cream puffs
custard
double crust pie
eclairs
flute
fruit filling
meringue
pastry
pie crust
pierce
single crust pie
tarts
turnover



ACTIVITY 26-1

DIRECTIONS: Fill in the blanks with the word that completes the statement. The words are provided.

chiffon
cream
custard
double
filling
flour
fruit
pastry
salt
single
shortening
tarts
turnovers
water

1. ____________ refers to baked products made from dough rich in fat.

2. A ____________ crust pie has a crust at the bottom.

3. A ____________ crust pie has one crust at the bottom and another as a covering.

4. ____________ are single-serving pies.

5. ____________ are fried pies.

6. Most pastries are made of ____________,
___________, ___________, and ___________.

7. Pies are named for their ____________.

8. Four kinds of pie fillings are ____________,
___________, ___________, and ___________.

Chapter 27
Basic Service Skills

COMPETENCIES TO DEVELOP

- Welcome guests and oversee customer comfort.
- Handle customer complaints.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.

GOALS TO REACH

- Identify personal skills needed by service personnel.
- Describe factors affecting customer response.
- Identify ways to please customers.
- Identify ways of selling products in food service businesses.
- Describe menus used in food service.
- Outline ways of being a good salesperson.
- Identify methods of managing responsibly.

The service people deal directly with the customers. They greet and seat customers. They sell and serve food, receive money for sales, and make change. The service people must look nice. They should be friendly and have a positive attitude.

Appearance is the way someone looks. It is one of the first things customers notice. Good grooming is very important. Hair should be clean. Hair should be short or put up. Skin should be clean and clear.

It is important to take a bath each day. A deodorant should be used to prevent body odor. There should be no bad breath. Hands should be kept clean. Nails should be short and unpainted.

Many food service places require that employees wear uniforms. These should fit well. The uniforms should be clean and in good repair.

Service people should be friendly and courteous. These are part of a pleasing personality. Personality is the way you appear and act toward others. Your actions are watched by the customers. They can tell if you like your job.

Your attitude shows your general outlook on life. It is the way you react to people, things, or events. A positive attitude would mean you see people as friendly and fun to be with. A negative attitude would show that you do not like being around people.

Good communication skills are important for service people. These would be skills like speaking, listening, writing, and nonverbal communication. When you are speaking with people you should speak clearly. Your voice should be pleasant and easy to listen to.

Good listening skills are also very important. You should be an active listener. Listen for the main ideas and facts. You should maintain eye contact. Look the person in the eye and listen. Don't be looking around while someone is talking to you.

Written communication is also used in food service. Food and drink orders need to be taken. Totaling check and sales tax are important too.

Nonverbal communication is facial expressions, the way you stand, gestures, and body movements. People can tell by your movements if you like your job. A simple smile can show friendliness.

Customers will return to a place where people are friendly. They also want good service and good quality food. Try to be helpful and kind.

Service people have an important role selling menu items. The menu design is a good selling tool. Service people should know as much about the menu as possible. There are two main types of menus: a la carte and table d'hote. A la carte means that each food item is priced separately. Table d'hote means that the menu features complete meals at set prices. Some places list foods in both ways.

Suggestive selling is done in many places. This is to increase the customers interest in menu items. Sincere suggestions will increase sales.

Service people have the chance to influence customers to return. Be nice to customers. Invite them to return.

Service people have many other jobs besides dealing with customers. They spend time in food preparation, going to and from the kitchen, and picking up orders. They must use their time and energy in the best way.

Being organized makes more time for the customers. You should know your job and how to do it. Plan ahead so that time and energy are not wasted.

Service people can also help in controlling costs. Take orders correctly so that food is not wasted. Customers checks should be done correctly. This helps in controlling the money.

Points To Remember

- Service people deal directly with customers.
- Service people should look nice, be friendly, and have a positive attitude.
- Appearance is the first thing customers notice about service people.
- Service people communicate by speaking, listening, writing, and nonverbal communication.

- Food service people should be nice to the people they work with.
- The menu is one of the most important tools in food service.
- The two basic types of menus are a la carte and table d'hote.
- Organization of serving jobs makes more time for customers.

Words To Know

a la carte
appearance
attitude
communication
courteous
customers
facial expressions
gestures
grooming
menu
nonverbal communication
personality
positive attitude
suggestive selling
table d'hote
uniforms

ACTIVITY 27-1

DIRECTIONS: Choose the best side dish for specific food items by completing the match. Match each side dish with a food item. Place the letter of the **SIDE DISH** in the blank to the left of the **FOOD** item. Use each letter only once.

	FOOD		SIDE DISH
_____1.	Toast	A.	Milk
_____2.	Hamburger	B.	Soup or salad
_____3.	Sandwich	C.	Garlic and salad
_____4.	Spaghetti	D.	Orange juice
_____5.	Steak	E.	Fries and a soft drink
_____6.	Sweet roll	f.	Baked potato

ACTIVITY 27-2

DIRECTIONS: To identify personal skills needed by food service workers, complete the following checklist. Read each question carefully. Place a check in the column which best describes your behavior in your food service business or classroom laboratory.

Characteristics	Most of the Time	Sometimes	Seldom
1. Appearance			
Do you start the day with a smile?			
Do you check your appearance before going to work?			
Do you check your clothing for rips, missing buttons, and sagging hems?			
Do you wear the needed undergarments?			
Is the length of your skirt or pants correct?			
Does your clothing fit properly without being too tight or too loose?			
Is your hair clean and neat?			
Do you wear a hair net or cap when working?			
Females, is your makeup put on in small amounts on a clean face?			

Characteristics	Most of the Time	Sometimes	Seldom
2. Cooperation			
Do you observe and obey the rules and policies of the food service business?			
Are you willing to do whatever job is given to you?			
Are you willing to do jobs not given to you at first?			
Can you make changes for unexpected reasons?			
Do you get along with your co-workers? your supervisor?			
Have you gained the friendships and respect of those for whom you work?			
Do you respect the authority of those for whom you work.?			
Are you willing to try to work with someone you do not like?			
3. Courtesy			
Are you nice while working?			
Are you always courteous, polite, and patient with fellow workers and your supervisor?			

Characteristics	Most of the Time	Sometimes	Seldom
4. Communication			
Do you speak in a pleasant manner and moderate tone?			
Are you able to speak English?			
Do you have good telephone manners?			
Do you take correct messages?			
Do you listen carefully?			

Look at your answers on the completed self-evaluation check list and complete the following:

My strentghs are ______________________________________

____

My weaknesses are ____________________________________

My plan for personal improvement includes ______________

____

____

Chapter 28
Sidework

COMPETENCIES TO DEVELOP

- Perform opening, closing, and sidework duties.
- Sort, count, and store utensils at correct places.
- Clear items from tables, remove soiled items from tables and stations.

GOALS TO REACH

- Identify the people who do the sidework.
- Identify sidework routines performed before, after, and during serving hours.
- Describe a work station and service stand.
- Identify the equipment and supplies used in sidework duties.
- Describe the method for performing work area duties.

Sidework includes all of the jobs given to service people. These jobs or duties are in addition to their service jobs. An assigned worked area is called a work station. In some places, the job of cleaning the dining area is given to one person. This person is called a busboy or busgirl.

Sidework includes duties given before or after serving hours. The closing duties involve cleaning the dining room. Everything is put in its proper place. The tables, chairs, and other surfaces are cleaned. Salt and pepper shakers and sugar bowls are cleaned and filled. The heavy cleaning is usually done after closing. This would include clean- ing the floors, walls, and windows.

Opening duties are done at the beginning of the day. Lights and appliances are turned on. Cleaning may also include taking care of the outside. Opening duties may include setting tables and inspecting dishes, glasses, and flatware. One of the most important duties is setting up the service stand. It is an area which has supplies needed in the dining room. There are two types: the side stand and the booster stand.

The main sidework duties are listed below:

1. Managing the service stand.
2. Inspecting, cleaning, and polishing the service stand.
3. Setting and resetting the tables.
4. Cleaning the dining room.

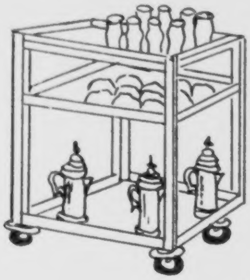
Each person should know how to do these duties.

The service stand is stocked with supplies and food items. Supplies would be things like ashtrays, linens, paper napkins, straws, and much more. Food items include garnishes, condiments, ice, beverages, bread, and desserts.

Serviceware includes dishes, glasses, and flatware. Taking care of serviceware includes inspecting it for cleanliness. There should not be any chips or cracks. Glasses and flatware should be clean and free from spots.

Tables should be set before customers arrive. It saves time. Serviceware should not be touched where the food will be.

The general duties in the dining room are dusting, cleaning, sweeping, and vacuuming. Dusting should be done before vacuuming, however, it is done after sweeping the floors.



Points To Remember

- Sidework includes all jobs given to service people.
- An assigned work area is called a work station.
- A service stand is the area which contains the supplies needed in the dining room.
- Major sidework duties include managing the service stand; inspecting, cleaning, and polishing serviceware; setting and resetting the tables; and cleaning the dining room.

Words To Know

booster stand
busboy
busgirl
closing duties
flatware
inspect
opening duties
service stand
serviceware
sidestand
sidework
work station

ACTIVITY 28-1

DIRECTIONS: Answer the following questions regarding duties performed before, during, and after serving hours.

1. What is the meaning of sidework?__________

2. What duties are closing duties?__________

3. What duties are opening duties?__________

4. Which duties are performed during serving hours?__________

ACTIVITY 28-2

DIRECTIONS: Complete the following activity to identify the four major sidework duties performed by food service personnel. First, fill in the blanks in each word below with the missing vowels. Then, unscramble the words to create a meaningful word order. Write your new word order on the solid lines.

A	**E**	**I**	**O**	**U**
1	**2**	**3**	**4**	**5**

1.t___bl___s r___s___tt___ng ___nd s___tt___ng
1 2 2 2 3 1 2 3

2. r__ __m th__ d__n__ng cl__ __n__ng
4 4 2 3 3 2 1 3

3. st__nds m__n__g__ng s__rv__c__
1 1 1 3 2 3 2

Chapter 29
Styles of Service

COMPETENCY TO DEVELOP

- Utilize appropriate customer service procedures.

GOALS TO REACH

- Describe the styles of service.
- Describe examples of dining room service.

Styles of serving differ in food service businesses. Counter, trayline, and seated service are types of service.

Counter service is usually found in fast-food places. The person behind the counter takes the customer's order. The food is served on a tray or in a take-out bag. The service is simple but fast.

Trayline service uses trays to move food from the kitchen or serving area to the dining area. It is used in cafeteria style places. All food items are ready to serve when the customer arrives. One food service worker takes care of each major area. They must keep the containers filled and the counter looking nice. They also control portions of food.

Seated service businesses offer many choices on their menu. There are different types of seated service. American or plate service is the most common in the United States. The food is placed on the plate and garnished.

French style service is used in very expensive places. Two waiters work at each table. The food is served from a cart. A small stove is used to keep the food warm. This style of service takes a lot of time and space.

Russian style is similar to French style but simpler and usually less expensive. The food is made in the kitchen and placed on a silver platter. The waiter shows the food to the customers. The waiter or waitress then serves the food.

English service is used for special dinners. The food is placed on a cart. It is then served by the host. Family service is similar to English. The food is placed in serving bowls. They are then put in the center of the table. People at the table serve themselves from the serving bowl.

In buffet service, the guests serve themselves from a choice of foods. Plates are placed at the serving table. Another style is banquet service. It is adapted from American style service. Combinations of all of the styles may also be used.

The food service worker's job may include folding napkins or setting tables. Table tops should be cleaned before a tablecloth is put on the table. The tablecloth should hang the same length on each side of the table. Different types of services place dishes in different places. The table setting for one person can also be called a cover. Napkins may be folded and placed to the left of the fork. Napkins can also be folded in special ways and stood in the center of the cover. The flatware is arranged in the order of use. The piece used first is placed at the outside.

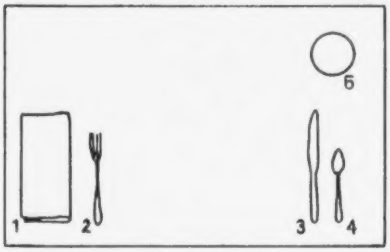
Points To Remember

- The types of food service are counter, trayline, and seated service.
- Counter service is usually found in fast-food places.
- Trayline service is used in cafeterias.
- Seated service includes American, French, Russian, English, buffet, and banquet

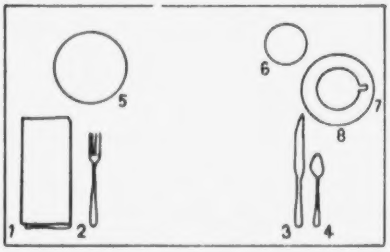
Words To Know

- The food service worker's job may include folding napkins or setting tables.
- A cover is the arrangement of flatware, dinnerware, glasses, and linens at each place setting.

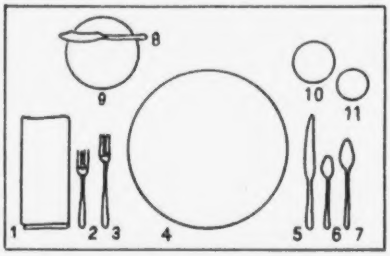
American or plate service
banquet service
buffet service
counter service
cover
English service
family service
French service
Russian service
seated service
tablecloth
trayline service



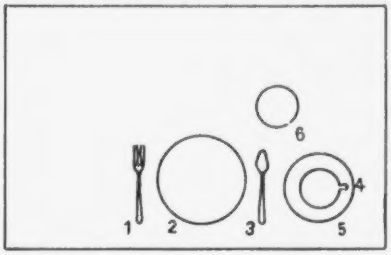
Cover setup for breakfast:
(1) Napkin, (2) Dinner fork, (3) Dinner knife, (4) Teaspoon, (5) Water glass



Cover setup for lunch:
(1) Napkin, (2) Dinner fork, (3) Dinner knife (4) Teaspoon, (5) Bread and butter plate, (6) Water glass, (7) Cup, (8) Saucer



Cover setup for dinner:
(1) Napkin, (2) Salad fork, (3) Dinner fork, (4) Cover plate, (5) Dinner plate, (6) Teaspoon, (7) Soup spoon, (8) Butter spreader, (9) Bread and butter plate, (10) Water goblet, (11) Wine glass



Cover setup for dessert course:
(1) Dessert fork, (2) Dessert plate, (3) Teaspoon, (4) Cup, (5) Saucer, (6) Water glass or goblet

ACTIVITY 29-1

DIRECTIONS: Place the letter of the best answer in the blank to the left of each item below.

_____ 1. Counter service
A. alway uses trays.
B. includes American service.
C. is found in fast-food places.
D. is very expensive.

_____ 2. Trayline service
A. is used in cafeterias.
B. is used in fast-food places.
C. includes American service.
D. is very expensive.

_____ 3. Which type of food service serves food from bowls in the center of the table?
A. Russian service.
B. English service
C. American Service.
D. Family service

_____ 4. Napkins are folded and placed
A. to the right of the plate,
B. to the left of the plate.
C. under the plate.
D. at the top of the plate.

_____ 5. Flatware used first is placed
A. on the plate.
B. at the inside nearest the plate.
C. over the plate.
D. at the outside of the setting.

ACTIVITY 29-2

DIRECTIONS: To review the styles of seated service, complete the following activity. In the blank to the left of each **STYLE**, write the letter of the **IDEA** that best describes it.

STYLES OF SEATED SERVICE

____ 1. American

____ 2. Banquet

____ 3. Buffet

____ 4. English

____ 5. French

____ 6. Russian

IDEAS

A. The food is placed on a cart and served by the host.

B. The food is placed on a silver and the waiter serves.

C. Food is placed on a plate and garnished.

D. It is used in very expensive places.

E. Adapted from American and used for large seated dinners.

F. Guests serve themselves.

Chapter 30
Table Service

COMPETENCIES TO DEVELOP

- Take dining reservations and determine seating needs, using space and personnel effectively.
- Welcome guests and oversee customer comfort.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.
- Relay orders to kitchen or serving counter.
- Pickup orders in kitchen, and verify by scanning filled plates and trays.
- Serve food and beverages in prescribed manner.
- Provide appropriate accompaniments with each course.

GOALS TO REACH

- Identify ways for greeting and seating guests.
- Describe methods for presenting menus to guests.
- Outline methods for writing orders.
- Describe methods for placing orders in the kitchen.
- Explain steps in picking up, assembling, and inspecting orders.
- List the order of service for breakfast, lunch, and dinner.
- Describe methods for serving food and beverages.

Table service restaurants may offer many food items or just a few on the menu. Some have certain foods like seafood. Others have a special theme like Mexico.

In most places the guests' first contact is with the headwaiter or hostess. This person takes them to their table. The table is chosen by the wants of the guests, the size of the party, and how crowded the restaurant is.

The guests are then given the menus. They may be given the menus opened or closed. The waiter should be available to answer any questions. They should know what is in season and the time needed by the cook to make the food. When the guests have made their choices the order is ready to be taken. You should find out exactly what the customer wants. Repeat the order to make sure it is right. The following is a list of special abbreviations that can be used in writing orders.

Appetizer

orange juice	OJ

Main Dish

barbecue beef	BBQ
cheeseburger	C Burg
fried chicken	F Chix
pork chops	PC

Sandwich

grilled cheese	GC
tuna sandwich	Ts

Vegetable

coleslaw	col
French fried potatoes	ff
mashed potatoes	mash

Beverage	
coffee	cof
iced tea	IT
tea	T

Orders should be given to the kitchen quickly. Clear communication is very important. The waiter or waitress should know the time needed to fix an item. While the food is being prepared, salads, appetizers, and drinks can be served.

When picking up an order, pick up cold food first. Separate the cold food from the hot on the serving tray. Make sure the cold food is served cold and the hot food hot. Customers want fast, courteous service.

When a man and a woman are eating together the woman should be served first. When more people are eating together, they are usually served right to left. You should start with the women.

Most foods are served from the left side with the left hand. Dishes should be held with four fingers under the lower edge. The thumb should be on the upper edge.

Breakfast should be served in courses. Coffee may be served when the menus are given. Fruit and juice are usually served first. The cereal is served next. The eggs or hot plate are served last.

Lunch can be a fast meal or a longer meal. The pace of service should be adjusted to the type of meals served.

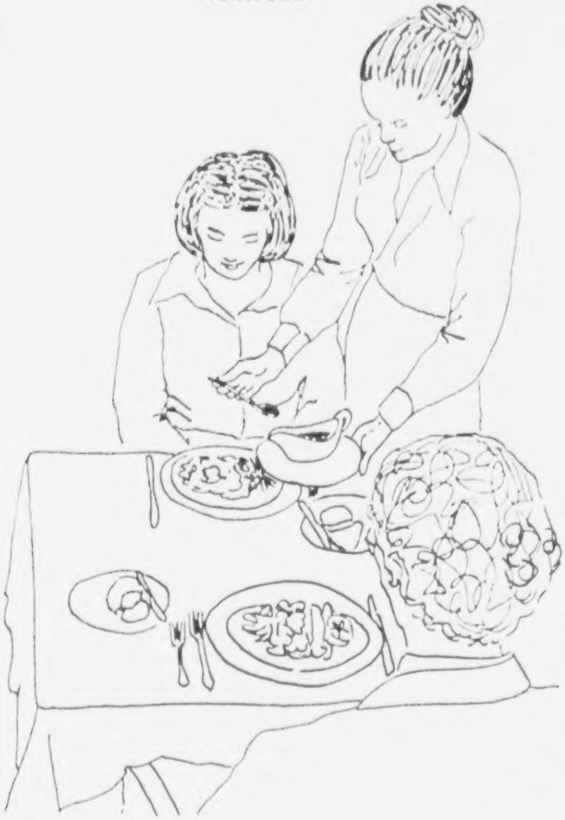
Dinner is usually the most formal meal of the day. The appetizer is served first. Next the soup or salad is served. Last the entree is served. If a dessert is ordered it would be served at the end of the meal. Coffee may be served along with the dessert.

Points To Remember

- In table service, food is served to the customer by a waiter or waitress.
- The guests' first contact is with the headwaiter or hostess.
- A waiter or waitress should be available for questions about the menu.
- Orders should be given to the kitchen quickly.
- Cold food should be served cold and hot food hot.
- Most foods are served from the left with the left hand.

Words To Know

courses
hostess
restaurant
waiter
waitress



ACTIVITY 30-1

DIRECTIONS: To save space, abbreviations are used when writing orders in food service places. Circle the words in the puzzle below to go with the abbreviations listed. The words in the puzzle may appear down or across. To help you remember, write the word on the line beside the appropriate word.

barbeque beef
cheeseburger
coffee
coleslaw
French fries
fried chicken

grilled cheese
mashed potatoes
orange juice
pork chops
tea
tuna sandwich

1. F Chix ______________
2. Cof ______________
3. mash ______________
4. T ______________
5. BBQ ______________
6. col ______________
7. GC ______________
8. OJ ______________
9. Ts ______________
10. C Burg ______________
11. ff ______________
12. PC ______________

Chapter 31
Counter and Self-Service

COMPETENCIES TO DEVELOP

- Welcome guests and oversee customer comfort.
- Present menus, answer questions, encourage purchase of additional menu items, and take food orders following prescribed methods.
- Relay orders to kitchen or serving counter.
- Pick up orders in kitchen, and verify by scanning filled plates and trays.
- Package take-out orders, and serve take-out customers.
- Serve food and beverages in prescribed manner.
- Provide appropriate accompaniments with each course.

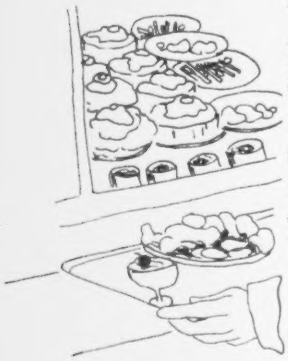
GOALS TO REACH

- Identify the types of counter and self-service.
- Describe the methods for preparing a restaurant for counter and self-service.
- Describe methods for taking and relaying orders.
- Identify food preparation jobs done by counter service people.
- Identify methods for serving counter and self-service orders.
- Describe methods for packaging take-out orders.

Many food service customers want a low priced, quick meal. Quick service restaurants provide this. They may have counter, tray, or self-service. These are inexpensive and informal.

Counter service has easy to fix meals and short order. Prepackaged food and fountain items can also be received. Before serving hours, a counter worker makes sure the supplies are stocked. This would include napkins, straws, and condiments. In some places the customers are seated at the counter. Other places the customer waits in a line to be served. The menu may be printed on a large board. Counter workers may do some of the preparing of the order. This may be the preparing of the drinks. Everything should be kept clean. This is because the customers can see everything behind the counter.

Self-service restaurants provide food items quickly. Examples of these are cafeterias or buffets. In a cafeteria, the customers serve themselves except for certain foods. Everything on the service line should be arranged so it looks nice. The cafeteria worker serves the food that the customer requests. The worker can help control the portions. The entrees are served from a steam table. Desserts and drinks are usually self-service. At the end of the line, the customers' items are put on a bill. The customer then takes the tray of food to a table. The food is removed from the tray and placed on the table. A dining room attendant is there to help the customers. After customers have finished their meal, the attendant cleans the table.



A buffet may serve appetizers, hot and cold entrees, vegetables, and salads. The food is placed on a long table. The guests can walk around it and serve themselves. The service people arrange the buffet line and clean up after the meal.

Take-out service provides food for taking from the food service place. Most fast-food places are take-out. The customers may order their food through a window, over an intercom, or inside at the counter. The order is then packaged "to go." Counter workers put the orders together. Counter workers then serve the customer. They also add the sales check , collect the money, and make change.

Food is also available from machines. Vending machines and automats are considered self-service. Vending machines may have hot or cold foods. Some foods are frozen and then cooked in a microwave. Automat machines have the food items behind a small glass door.

Points To Remember

- Quick-service restaurants may be counter, tray, or self-service.
- Quick-service is usually inexpensive and informal.
- Counter service features easy-to-fix meals, short order, prepackaged food, and fountain items.
- Self-service includes cafeteria and buffet.
- Counter workers operate beverage machines.
- The counter worker stocks supplies and some food items beneath the counter.
- Sanitation is very important for counter workers.
- In a cafeteria, customers serve themselves except for certain foods.
- The buffet table is usually placed where guests can walk around it and serve themselves.
- In take-out service, foods are packaged to be eaten off the premises.
- Vending machines and automats are forms of self-service.

Words To Know

automat
buffet
cafeteria
condiments
counter
dining room attendant
intercom
pre-packaged food
quick-service restaurants
short order
take-out service
vending machines

ACTIVITY 31-1

DIRECTIONS: The following exercise will help you describe procedures for packaging take out orders and serving take out customers. Answer the following statements by circling the **T** if the statement is true or **F** if the statement is false. If the statement is false, write the corrected statement on the lines provided. When you have answered all of the statements, start at "1" and go through the **Packaging Maze** (p. 156) passing through the blank of each answer you circled. Remember, only the correct answers will allow you to move through the maze. A wrong answer will lead you to a dead end.

T **F** 1. Take out orders may be complete meal, single item, or meal combinations.

____

T **F** 2. Some seated-service restaurants and cafeterias offer take out service along with table service.

____

T **F** 3. All fast-food service businesses feature take out service.

____

T **F** 4. Supplies of prepackaged foods should never be restocked during serving hours.

____

T **F** 5. Take out orders may be placed only at a drive up window or an automated ordering device.

____

T F 6. Repeat an order to the customer only if you are not sure it is correct.

____

T F 7. When packaging take out orders, they should be wrapped, sacked, boxed, or placed in disposable containers.

____

T F 8. Include salt, pepper, and sauces in a take out order only when a customer requests it.

____

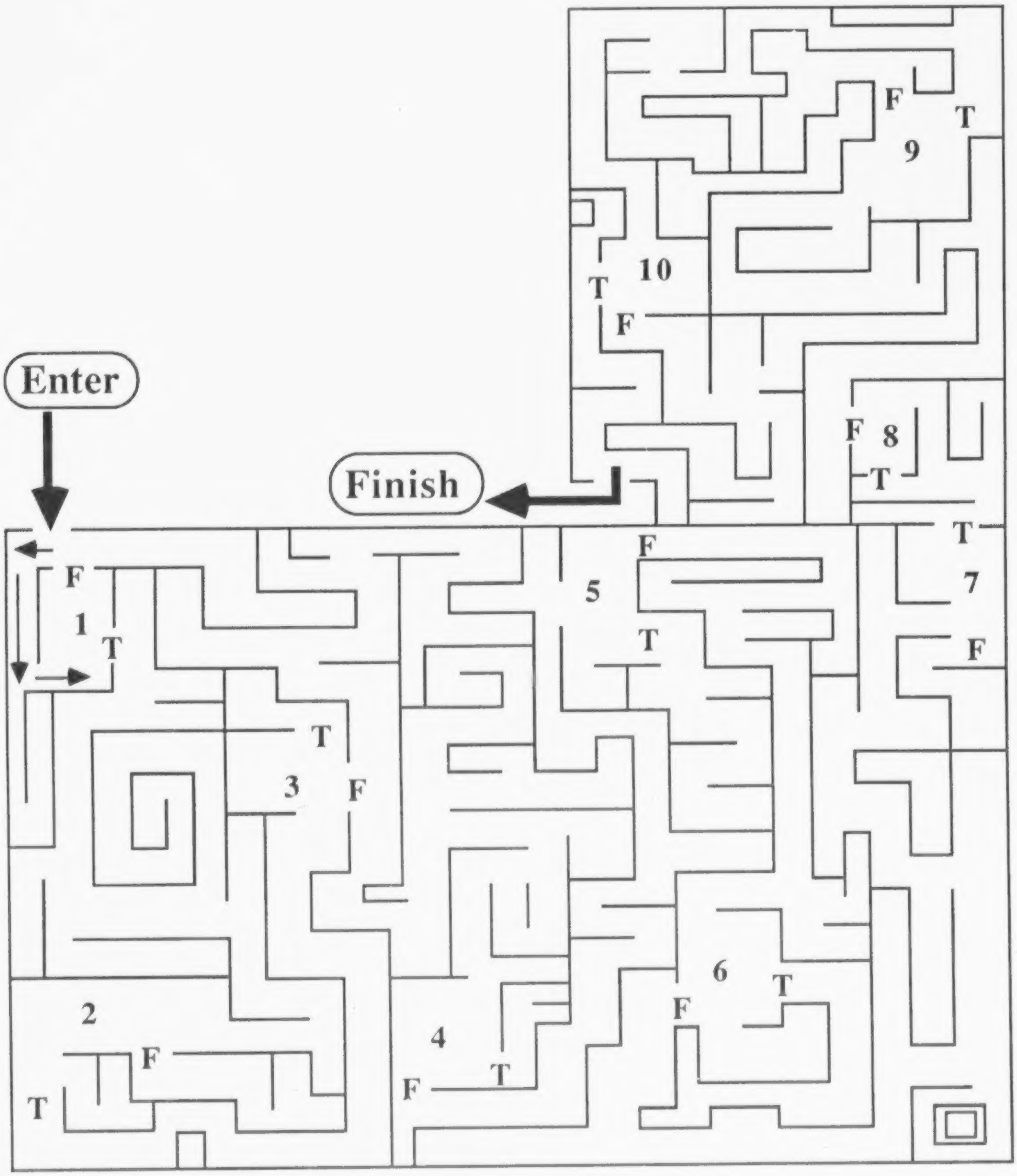
T F 9. As a convenience to the customer straws, napkins, and plastic utensils should always be provided in a take out order.

____

T F 10. After the take-out order is given the counter worker may serve the customer.

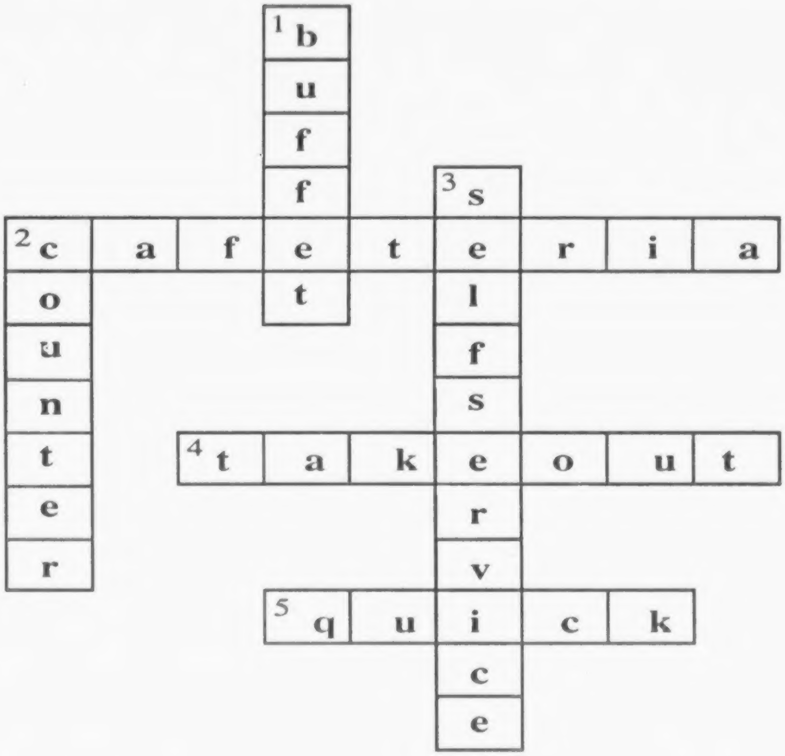
____

Packaging Maze


F
T
9
10
T
F
Enter
Finish
F
8
T
T
F
7
5
F
1
T
T
F
T
3
F
6
T
2
F
4
T
T
F
F

ACTIVITY 31-2

DIRECTIONS: The following crossword puzzle has the answers already filed in. In the spaces provided, write a clue for each answer. The clues should define or explain each style of service.


1 buffet
2 cafeteria
2 counter
3 selfservice
4 takeout
5 quick

ACROSS

2. ____________________
____

4. ____________________
____

5. ____________________
____

DOWN

1. ____________________,
____

2. ____________________
____

3. ____________________
____

Chapter 32

Other Types of Food Service

COMPETENCIES TO DEVELOP

- Set up rooms for catered parties.
- Serve food at customer's table, a seated banquet, or special occasion.
- Pack and transport beverages, utensils, and equipment.
- Maintain quality of transported food.
- Unload and deliver food and beverages.
- Serve food and beverages to guests or patients in their rooms.
- Check guests' or patients' needs and supply needed items.
- Pick up food carts, and empty trays from patients, guests, or customers.
- Pick up and return trays, dishes, utensils, and equipment to dishwashing area.
- Prepare artistic food displays for serving lines, buffets, soup and salad bars, and special events.

GOALS TO REACH

- Identify methods for setting up rooms for special occasions.
- Outline methods for banquet service.

- Summarize preparation and methods used in catering.
- Outline methods used for preparing, moving, and serving orders for room service.
-
- Outline methods for assembling patients' trays.
- Describe showmanship when preparing, decorating, and displaying food.

Most food service people work in restaurants. Other people may work in a special type of service place. Some of these are banquet service, catering, and tray service.

Banquet service may be found in hotels and restaurants. Schools and hospitals also use banquet service. The room arrangement is very important. Tables which seat 6 to 10 people are faster to serve than long banquet style tables. After the tables are arranged, the tablecloths are put on, then the tables are set.

Banquets are served using either American or Russian style service. In American service, the table is completely set before the meal. All the cold food like bread, butter, and water is placed on the table. The hot food is served on a plate. In Russian service, the table is completely set, even with plates. The food is then served from silver platters.

Catered service provides food and service people for social and business functions. A caterer is in charge of the service. A caterer may work from a licensed home kitchen, a restaurant, or a business. Caterers can provide meals anywhere. Caterers usually fix the food in their own kitchens. It is then taken to the place to be served.

Tray service may be in hotels, motels, hospitals, nursing homes, or on an airplane. In hotels, the style of service is called room service. The guest orders food from his or her room. After the food is made, it is taken to the guest's room.

In hospitals, the trays may be fixed on an assembly line. Special diet orders must be followed. The plate is covered to keep the food warm. The plates are placed on a cart. The food is taken to the rooms.

On airplanes, the style of service is called passenger tray service. The food is fixed in flight kitchens. It is placed in large refrigerators or warmers and taken to the plane. The flight attendents serve the food.

Some special foods need special service. Coffee and tea may be served from a special silver service. Punch is usually served from a large bowl with a ladle. Hors d'oeuvres are served from trays and plates. These are fixed in the kitchen. A tray may be carried among the guests. The food may also be served from a table.

Points To Remember

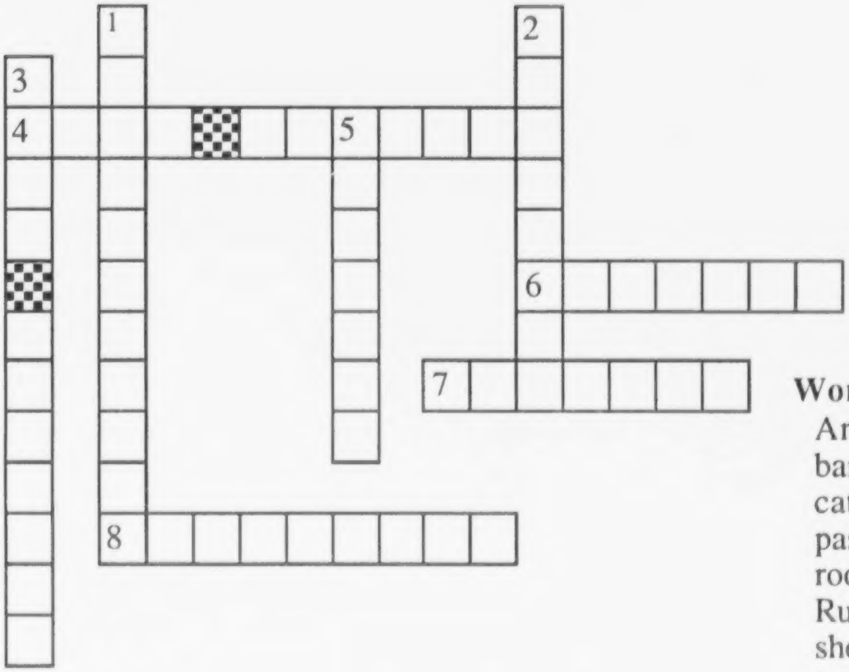
- Banquet service, catered service, and tray service are special types of food service.
- Table arrangement is important in banquet service.
- Banquets are usually served using either American or Russian style service.
- A caterer may work from a home kitchen, a restaurant, or a business.
- Room service is for hotels and motels guests to be able to eat in their room.
- Special diets may be used for hospital trays.

Words To Know

banquet service
catered service
caterer
diet orders
flamed
food showmanship
passenger tray service
room service
tray service

ACTIVITY 32-1

DIRECTIONS: Use the clues to fill in the words in the crossword puzzle. The **Words Used** are provided.



Words Used

- American
- banquet
- caterer
- passenger
- room service
- Russian
- showmanship
- tray service

ACROSS

4- guests order food from their rooms
6- provides food for social and business functions
7- provided in hotels and restaurants, room arrangement is important
8- type of tray service used in airplanes

DOWN

1- making fancy foods
2- table set completely before
3- service used in hospitals
5- food served from silver

Chapter 33
Money Handling

COMPETENCIES TO DEVELOP

- Itemize and total price of each order.
- Present check to customer and accept payments or refer customers to cashier.
- Handle payments (cash, checks, credit cards), operating a cash register, making change, and writing receipts.
- Prepare cash drawer.
- Prove cash, and prepare deposits.
- Give tips to proper waiters or waitresses.
- Display, sell, order, and restock counter items.

GOALS TO REACH

- Describe the method for figuring the check.
- Describe the method for giving checks to customers.
- Summarize the method of making change.
- Summarize the method for confirming the cash on hand.
- Give the guidelines for handling tips.

The main purpose of a food service place is to make a profit by serving customers. The food service worker often must figure the check and take the money.

The first step is to figure the check. The check includes menu items, cover charges, sales tax, and special services. There may also be extra charges for refills. Tips are sometimes figured in. Most food service places have a tax table for workers. This helps them figure the sales tax needed. If a mistake is made, mark though it, do not erase.

The check should be figured away from the customer's table. The check should be placed face down near the host. If unsure as to who the host is, place the check near the center of the table. Some restaurants use a check tray. The check is placed on the tray face up. The customer then places money on the tray. The food service employee takes the tray to the cashier. The change is then returned to the host. Cafeterias have a cashier at the end of the line. The cashier rings up the total on a cash register.

Making change is a very important job. The change should be accurate. The amount of the sales check and the money received should be repeated. Count up from the smallest coin to the largest bill.

If using a cash register, the cash drawer should be counted at the start of the day. It should be counted again at the end of the day. The cash register will record the total sales. More money in the drawer than is on the total sales is referred to as cash over; to little money is referred to as cash short.

A tip is a small amount of money given in return for a service. Most people give 15 to 20 percent of the total check. Don't stay at the table waiting for a tip. Smile and thank the customer.

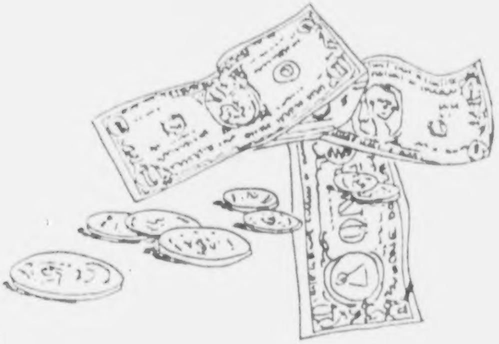
Points To Remember

- The check includes menu items, cover charges, sales, and special services.
- A tax table can be used to figure the sales tax.
- The check should be placed face down near the host or near the center of the table.

- The check is presented face up when a check tray is used.
- Count change back to the customers by repeating the amount of sales check and the amount of money.
- At the beginning and the end of each day the cash drawer should be counted.
- A tip is a small amount of money often given in return for service.

Words To Know

cash drawer
cash over
cash register
cash short
cashier
change
check
check tray
sales tax
tip



ACTIVITY 33-1

DIRECTIONS: What is the least possible number of coins you can give customers when their change is in the following amounts? Put the number of coins needed in the blank beside each amount given. In the parenthesis, list the coins in the order you would use them in counting back the change to a customer. Do not use fifty-cent pieces.

EXAMPLE: 59¢ ____7____ (4 pennies + 1 nickel + 2 quarters)

1. 42¢ ________ (______________________________)

2. 63¢ ________ (______________________________)

3. 75¢ ________ (______________________________)

4. 83¢ ________ (______________________________)

5. 92¢ ________ (______________________________)

6 20¢ ________ (______________________________)

7. 69¢ ________ (______________________________)

ACTIVITY 33-2

DIRECTIONS: Follow the correct procedures for counting out change to a customer. (a) Write the correct denomination needed to make the change in the space provided. (b) Write how to count the change back to the customer.

EXAMPLE: $1.25 $2.00
a. 3 quarters
b. $1.25, $1.50, $1.75, and $2.00

TOTAL BILL	MONEY RECEIVED
1. $1.25	$5.00

a. ______________________________

b. ______________________________

2. $1.79	$2.00

a. ______________________________

b. ______________________________

3. $1.79	$10.00

a. ______________________________

b. ______________________________

4. $1.79	$20.00

a. ______________________________

b. ______________________________

Chapter 34
Management Responsibilities

COMPETENCIES TO DEVELOP

- Describe personal qualities which lead to job success in food management, production, and services.
- Develop, evaluate, and implement organizational goals, policies, and procedures in the operation of food service.
- Interpret and comply with laws and statutes pertaining to food service establishments.

GOALS TO REACH

- Identify traits needed by a successful food service manager.
- Evaluate the food service operation in terms of organizational goals, policies, and procedures.
- Identify laws and codes most related to food service operations.

Food service managers are involved in many jobs. They design menus, purchase food, and do the payroll. Management means getting work done, when, and how you want it done.

A good food service manager must have certain traits. He or she should be able to work with other people and be responsible. A good manager must be able to make-up and meet organizational goals.

Organizational goals are objectives that need to be met. To help with the goals, policies and procedures are also outlined. A policy provides guidelines for working. Procedures provide a method by which to carry out the policy. All of these are part of planning done by managers.

There are also laws and codes that are related to food service. Sanitary codes are laws which help with sanitation in food service. Inspectors come by and check food service businesses to make sure they meet state and local standards. The manager must make sure the food service business passes these inspections.

There are also laws about employment, salary, and benefits. These laws may deal with taxes, social security, and minimun wage. Managers should know about the laws. They should follow these laws.

Points To Remember

- Food service managers are involved in, and responsible for, tasks such as menu design, food purchasing, and payroll.
- Management refers to getting work done when and how you want it done.
- A good food service manager should have certain traits.
- An organizational goal is an objective that the food service business needs to meet.
- Policies provide guidelines for operations.
- Procedures provide methods by which the policy is carried out.
- Sanitation codes were developed to help keep food service businesses sanitary.
- There are laws which deal with employment, salary, and benefits.

Words To Know

benefits
employment
management
minimum wage
organizational goals
policies
procedures
salary
sanitation codes
wage

ACTIVITY 34-1

DIRECTIONS: The numbers below are an alphabet code. Each number stands for a letter in the alphabet. Look at the number under the blanks in the phrases. Find the letter that goes with each number. Then write that letter in the correct blank.

1	2	3	4	5	6	7	8	9	10
A	E	I	O	U	L	N	R	S	T

Qualities of a Good Manager

A successful manager should be

1. able ___ ___ w___ ___k w___ ___h
10 4 4 8 3 10

p___ ___p___ ___.
2 4 6 2

2. ___ ___ ___p___ ___ ___ ___b___ ___.
8 2 9 4 7 9 3 6 2

3. able to ___ ___ ___d, w___ ___ ___ ___, and
8 2 1 8 3 10 2

___p___ ___k w___ ___ ___.
9 2 1 2 6 6

4. ___xc___ ___ ___d and
2 3 10 2

c___ ___ ___ ___ ___v___.
8 2 1 10 3 2

5. able to ___ ___ ___ g___ ___ ___ ___.
9 2 10 4 1 6 9

ACTIVITY 34-2

DIRECTIONS: Locate the words given below in the **Word Search** puzzle. Cirlce each word. The words deal with concerns of managers. The **Words Used** are listed below the puzzle.

Word Search--
Managers' Concerns

c	l	o	e	l	c	o	d	e	s
m	a	n	a	g	e	r	p	t	o
p	w	a	g	e	m	g	o	t	f
r	s	s	l	e	p	a	l	c	m
o	a	a	o	s	l	n	i	r	y
c	l	n	y	e	o	i	c	w	c
e	a	i	m	c	y	z	i	r	t
d	r	t	e	i	m	e	e	u	g
u	y	a	n	r	e	r	s	q	v
r	m	r	t	i	n	p	r	a	j
e	v	y	c	b	t	e	y	f	g
s	t	i	d	o	d	e	s	y	t

Words Used:

codes
employment
laws
manager
organize
policies
procedures
salary
sanitary
wage

Chapter 35
Cost Control

COMPETENCIES TO DEVELOP

- Cost menu items, set menu prices of foods, and make changes in menus when needed.
- Prepare market orders, and purchase food and consumable supplies.
- Select, develop, and standardize recipes.
- Plan menus appropriate for the type of food service.

GOALS TO REACH

- Identify food, labor, and equipment cost-control procedures.
- Identify factors influencing menu preparation.
- Describe the method used to standardize recipes.

The menu is the guide for most food service places. It helps in controlling cost. The menu aids in deciding what to buy, how much food to buy, and what equipment will be needed.

Menus are fixed or rotated. Fixed menus are standard menus. They always stay the same. Rotated menus change every few days or weeks. Menus are planned to meet the nutritional needs of the customers. Customers likes and dislikes are the main considerations.

When planning the cost of food items many things must be considered. These are labor cost, overhead, food cost, and profit. Labor costs are related to what the employees are paid. Overhead is the cost of rent, utilities, and equipment repair. Food costs are what is spent on food. Profit is the money the owner makes after everything is paid for. Managers use special math formulas to help set the prices.

Standard recipes can also help control cost. They identify the number and size of portions made. This helps the manager know how much food to buy. Standard recipes should be tested before they are served to customers. The taste, appearance, time for making, and cost should be considered.

Points To Remember

- The menu is the guide in the food service business.
- Menus can be fixed or rotated.
- The labor costs, overhead, food costs, and profit are considered when setting menu prices.
- Standard recipes can be used to help control cost. This is done by identifying the amounts of food needed to make the recipe.

Words To Know

cost control
fixed menus
food cost
labor cost
overhead
profit
rotated menus
standard recipes

	Friday	Portion Size	
		Group	Group
Meat and Meat Alternate			
Vegetable and Fruit			
Bread and Bread Alternate			
Milk			
Other Foods			

ACTIVITY 35-1

DIRECTIONS: Write the letter of each definition next to the item it best matches.

____ 1. fixed menus

____ 2. labor cost

____ 3. profit

____ 4. rotated menus

____ 5. overhead

____ 6. food cost

a. what the employee is paid.

b. money owner makes

c. rent, utilities, and equipment repair

d. standard menu

e. identified number and size of portions

f. menus that change every few days or weeks.

g. what is spent on food.

Chapter 36
Buyers, Receivers, and The Storeroom

COMPETENCIES TO DEVELOP

- Contact purveyors, and compare food prices.
- Direct stockroom activities.
- Take inventories of food, utensils, and equipment.
- Utilize food, labor, and equipment cost control procedures.

GOAL TO REACH

- Give good methods to follow when purchasing food and consumbable supplies.

Two important areas for a food service manager are purchasing and inventory. Purchasing is buying supplies. Inventory is a list of supplies on hand. The person in charge of buying supplies is called a buyer or purchasing agent.

The buyer should know how the food and supplies are used. He or she should know the quality of items used by the food service place. The buying of food is based on the menu, food budget, and the labor costs.

There are 5 steps to follow when buying food and supplies:

1. Decide what is needed
2. Decide the quality and quantity (amount) for each item
3. Get price information from different suppliers
4. Choose the supplier and place the order
5. Follow up on the order, if needed

The buyer should take the time to check the order when it arrives. It should be counted and weighed. If this is not done correctly, losses may occur.

Food should be stored properly after delivery. This prevents food from spoiling. Strict control over the storeroom can prevent theft. To get food and supplies, a worker must have a special form. This form is called a requisition form.

An inventory identifies how many supplies are available. This helps in ordering new supplies.

Points To Remember

- Purchasing is buying food or supplies.
- Inventory is a list of supplies on hand.
- Five steps to buying food and supplies are (1) decide what is needed, (2) decide the quality and quantity for each item, (3) get price information from different suppliers, (4) choose the supplier and place the order, and (5) follow up on the order.
- Orders should be checked when delivered.
- An inventory identifies the supplies available.

Words To Know

buyer
inventory
purchasing
purchasing agent
requisition forms
storeroom
suppliers

ACTIVITY 36–1

DIRECTIONS: Using numbers 1 to 5, put the following ordering steps in order. The first step is done for you.

______ Choose the supplier and place the order.

______ Get price information from different suppliers.

______ Follow up on the order.

___1___ Decide what is needed.

______ Decide the quality and quantity for each item.

Chapter 37
Finances and Recordkeeping

COMPETENCIES TO DEVELOP

- Prepare and maintain records, correspondence, and forms.
- Plan and analyze finances, costs, and sales.

GOALS TO REACH

- Describe financial records needed in food service places.
- Identify ways in which computers are being used in food service.

Accounting and recordkeeping are an important part of the control system in food service businesses. This includes budgeting, cost-control and money handling. Some places hire accountants to do these records. This may also be done by managers.

These records can show if the business is making or losing money. A balance sheet is one type. It is an up-to-date record of what the business owns and owes.

Employee records are also kept by businesses. These records may be time schedules or time cards.

Businesses also have to record the taxes taken out of employees paychecks. These taxes are withholding tax and social security.

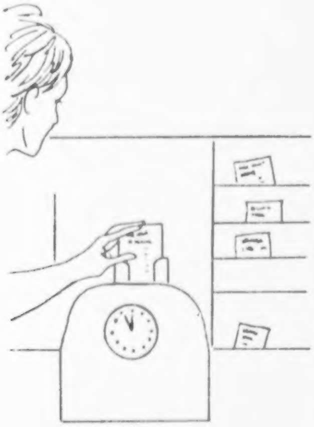
Computers are starting to be used more in food service businesses. Many cash registers are computers. Computers may be used for payroll, schedules, inventories, and billing. They make recordkeeping faster and prevent some error.

Points To Remember

- Accounting and recordkeeping are part of the control system.
- Balance sheets are an up-to-date record of what is owned and owed.
- Employee records may be time schedules and time cards.
- Withholding tax and social security are taken out of employee checks.
- Computers make recordkeeping faster.

Words To Know

accountant
accounting
balance sheet
computers
recordkeeping
social security
time cards
time schedule
withholding tax

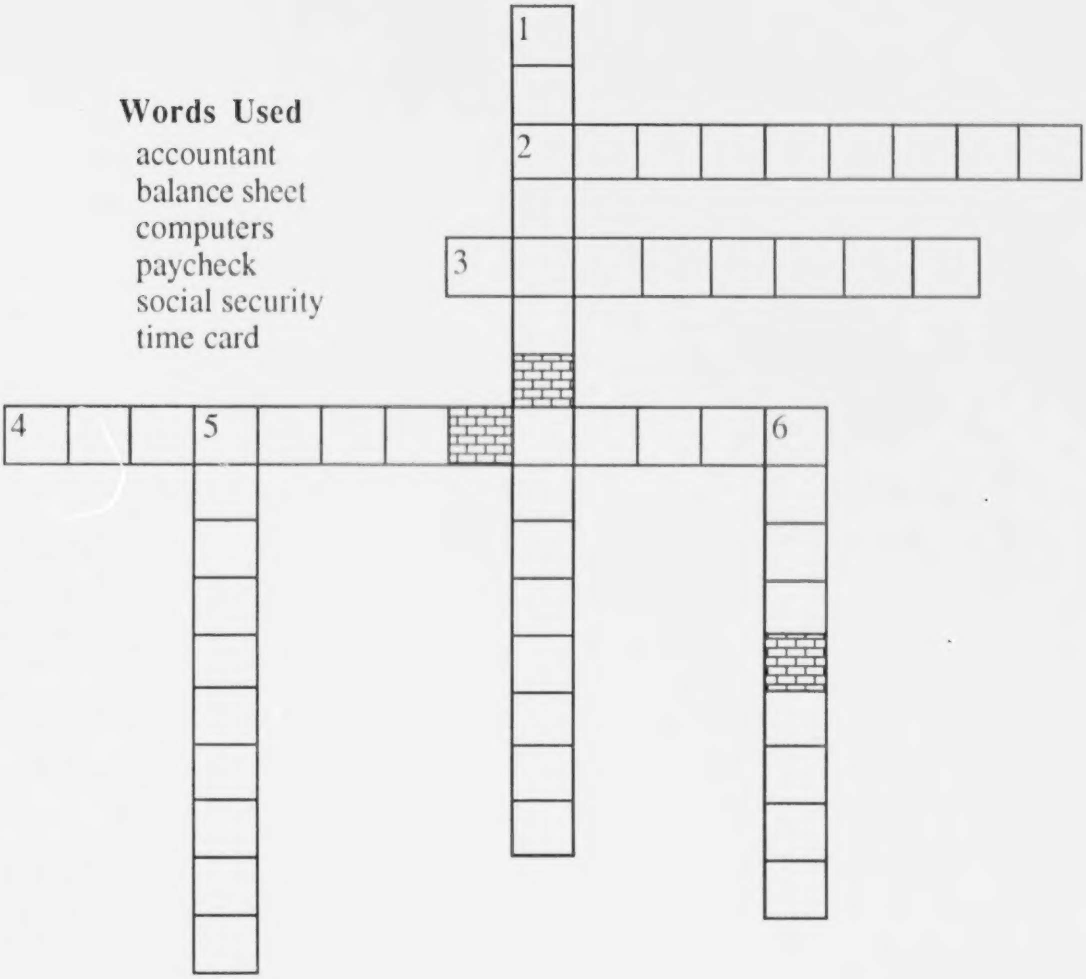


ACTIVITY 37–1

DIRECTIONS: Using the clues, fill in the crossword puzzle with the correct words. The **Words Used** are provided.

Words Used

accountant
balance sheet
computers
paycheck
social security
time card



Across

2- make recordkeeping faster
3- what employee's taxes are taken from
4- up-to-date record of what is owned and owed

Down

1- one type of tax taken out of paychecks
5- person who keeps records
6- type of employee record

Chapter 38
Personnel and Production Management

COMPETENCIES TO DEVELOP

- Identify procedures used to plan, interview, hire, evaluate, and discharge staff.
- Train personnel, and enforce policies of personal hygiene, sanitation, and safety.
- Prepare work schedules and job assignments.
- Evaluate use, cost, ease of preparation, and aesthetic qualities of food.
- Plan, coordinate, and supervise production.
- Set production standards.
- Control and improve the sequence of operations.
- Schedule food preparation tasks.

GOALS TO REACH

- Outline procedures for hiring and training new employees.
- Define a job description.
- Describe uses of production schedules.

Hiring and training staff is personnel management. Getting and keeping good service workers is hard. New employees may be found through newspaper ads. Word-of-mouth is also a good method.

New employees should be trained carefully. They should go through an orientation or introduction to the job. Training should help the employee with procedures and using the equipment. A job description tells what is done in that job. It may also tell what a person needs to know for that job.

The manager must make up the schedule for the employees. They may also have to ask an employee to leave. This may be firing or laying off. Employees may leave on their own by quitting. Most managers ask for a two-week notice.

The manager develops production schedules. These are records of the food made. Managers also help in scheduling employees and controlling food and labor costs. The quality of the food is also a concern of a manager.

Points To Remember

- Personnel management includes hiring and training staff.
- New employees should be carefully trained.
- A job description tells what is done in that job.
- The manager is responsible for firing and laying off employees.
- Production schedules record foods fixed.

Words To Know

firing
hiring
job description
laying off
orientation
personnel management
procedures
production schedule
quitting
schedule
training
word-of-mouth

ACTIVITY 38–1

DIRECTIONS: Circle words related to management in the word search puzzle below. The **Words Used** are provided. The words in the puzzle are written left to right and up to down.

Word Search--
Management Terms

n	p	e	m	p	l	o	y	e	e
f	r	q	a	b	v	n	a	s	t
i	o	x	n	h	i	r	i	n	g
r	d	o	a	z	w	y	b	d	l
i	v	e	g	h	t	b	m	n	a
n	t	j	e	w	v	m	i	p	y
g	k	p	r	c	b	n	o	g	o
p	e	r	s	o	n	n	e	l	f
q	j	o	n	v	p	c	o	w	f
b	v	d	k	l	i	w	c	v	p
v	q	u	i	t	t	i	n	g	j
b	s	c	h	e	d	u	l	e	t
v	o	t	r	a	i	n	i	n	g

Words Used

employee
firing
hiring
layoff
manager
personnel
product
quitting
schedule
training

Chapter 39
Merchandising and Public Relations

COMPETENCIES TO DEVELOP

- Arrange, design, and interpret menu sheets or folders.
- Evaluate use, cost, ease of preparation, and aesthetic qualities of foods.
- Apply merchandising techniques to ensure profit.
- Plan and conduct advertising and promotional programs.
- Handle complaints and human relations problems.

GOALS TO REACH

- Identify procedures for effective marketing programs.
- Describe factors that affect the merchandising of a food service operation.
- Identify methods for keeping customers.

Merchandising means carrying on the business. It is the showing of a product in such a way that makes people want to buy. This can also be called marketing. Marketing includes the study of the product, the market, and advertising of the product.

The products that food service businesses have are food and service. The market would be the customers. The manager must study the customers' likes and dislikes. Managers decide how and what they want to advertise.

The menu can be a good advertising tool. The menu should make the food sound good. Pictures of the food can be used.

Table tents can also be used as advertising. They are folding cards which stand on the table. The cards may tell of a special or a dessert that is offered.

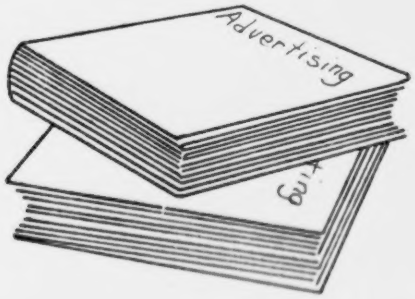
Employees should always be kind to customers. The employee should be dressed clean and neat. A clean restaurant and friendly employees make customers want to return.

Points To Remember

- Merchandising means carrying on the business or marketing.
- Marketing includes the product, the customers, and the advertising.
- Menus can be a tool of advertising.
- A clean restaurant and friendly employees make customers want to return.

Words To Know

advertising
market
marketing
menu
merchandising
product
table tents



ACTIVITY 39–1

DIRECTIONS: When a menu is presented to a customer it can act as a powerful merchandising tool. Menus are as different as the food service business they represent and they can be created in a variety of forms. Menus can be printed, mimeographed, or handwritten. Some are written on chalkboards or wooden planks. Whatever form is used, the menu should be clean, readable, limited to a reasonable number of items, organized so items can be located quickly, written in a language customers can understand, easy to change as prices or items change, in line with budget, designed to sell the items you want to sell, and planned to fit the business. Create your own menu on a separate sheet of paper keeping the above criteria in mind. When you have created your menu, evaluate the menu by completing the **Evaluate Your Menu** checklist below and on the following page.

Evaluate Your Menu

Evaluate the menu you have just created by placing a check mark (√) in the appropriate column below. Then answer the questions which follow the checklist.

My menu is	Yes	No
1. clean		
2. readable		
3. limited to a reasonable number of items		
4. organized so items can be located quickly		

My menu is	Yes	No
5. written in a language that customers can understand		
6. descriptive, but simple		
7. easy to change as prices or items change.		
8. in line with budget		
9. designed to sell items that you want to sell		
10. planned to fit the food service business		

Look at your answers on the checklist and answer the following:

1. Does your menu make use of all the criteria outlined in the directions of this activity?
   Yes _____ No _____ (check one)

2. What are the strengths of your menu? ______________________________

____

____

3. What are the weaknesses of your menu? ____________________________

____

4. What can be done to improve your menu? ___________________________

____

____